JVC

SERVICE MANUAL

MODEL
A-X55
STEREO INTEGRATED AMPLIFIER

No. 2589
Mar. 1982

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Warning: When replacing the parts marked with ⚠, be sure to use the designated parts to ensure safety.

1. Specifications

CIRCUITRY

Preamplifier : ICL, DC-servo MC/MM equalizer with EL-FETs in its initial stage

Power amplifier : 3-Stage differential ICL-DC "Dynamic Super-A" power amplifier with cascode-connected dual FETs and a boot-strap amp in its initial stage

ALLOVER CHARACTERISTICS

Output power (AUX IN → SP. OUT)
  1 kHz : 75 watts RMS per channel min. (8 ohms, 0.0007 % total harmonic distortion measured by JVC Audio Analyze System)
  : 83 watts RMS per channel min. (8 ohms, 0.7 % total harmonic distortion)
  20 Hz — 20 kHz : 70 watts RMS per channel min. (both channels driven into 8 ohms from 20 Hz to 20 kHz, with no more than 0.003 % total harmonic distortion.)

Total harmonic distortion
  AUX IN → SP. OUT : 0.003 % (20 Hz—20 kHz, 8 ohms) at 70 watts
  PHONO IN → SP. OUT at Volume −30 dB : 0.007 % (20 Hz—20 kHz, 8 ohms) at 70 watts

Intermodulation distortion
  (AUX IN → SP. OUT) : 0.002 % (60 Hz: 7 kHz = 4 : 1, 8 ohms) at 70 watts

Power band width (AUX IN→ SP. OUT) : 5 Hz—60 kHz (IHF,0.02 %, 8 ohms both channels driven)

Frequency characteristic : DC—300 kHz +0, −3 dB (8 ohms)

Damping factor : 150 (1 kHz, 8 ohms)

Input terminals
  Input sensitivity/impedance (1 kHz)
  PHONO (MM) : 2.5 mV/47 kohms
  PHONO (MC) : 180 μV/100 ohms
  TUNER : 160 mV/47 kohms
  AUX : 160 mV/47 kohms
  TAPE : 160 mV/47 kohms

Signal-to-noise ratio
  PHONO (MM) : 86 dB
  PHONO (MC) : 70 dB (250 μV input)
  TUNER : 110 dB
  AUX : 110 dB
  TAPE : 110 dB
  (IHF A Network short circuit)
  PHONO (MM) : 84 dB (Rec out)
  PHONO (MC) : 76 dB (Rec out)
  TUNER : 84 dB (Speaker out)
  AUX : 84 dB (Speaker out)
  TAPE : 84 dB (Speaker out)
  (IHF A-202)

Tone controls : TREBLE: ±8 dB (10 kHz)
  BASS: ±8 dB (100 Hz)

Subsonic filter : 18 Hz (−6 dB/oct)

Loudness control : 100Hz: +6dB, 10kHz: +4dB (at VOLUME −30 dB)

Muting level : −20 dB

EQUALIZER

PHONO overload capacity
  PHONO (MM) : 250 mV (1 kHz, 0.004 % THD)
  PHONO (MC) : 15 mV (1 kHz, 0.008 % THD)

PHONO RIAA deviation : ±0.2 dB (20 Hz—20 kHz)

Total harmonic distortion
  PHONO (MM) : 0.004 % (at 8 V output, 20 Hz—20 kHz)
  PHONO (MC) : 0.008 % (at 8 V output, 20 Hz—20 kHz)

Recording output
  Output level/impedance
  TAPE REC-1,2 : 160 mV/660 ohms (PHONO)

GENERAL

Power source : See page 22

Dimensions : 5-1/2''(H) x 17-1/8''(W) x 15-7/8''(D) (14.0 cm(H) x 43.5 cm(W) x 40.4 cm(D))

Weight : 22.0 lbs. (10 kg)

Design and specifications subject to change without notice.

2. Technical Explanation of ''Dynamic Super-A''

2-(1) Basic Configuration of ''Dynamic Super A'' Power Amplifier

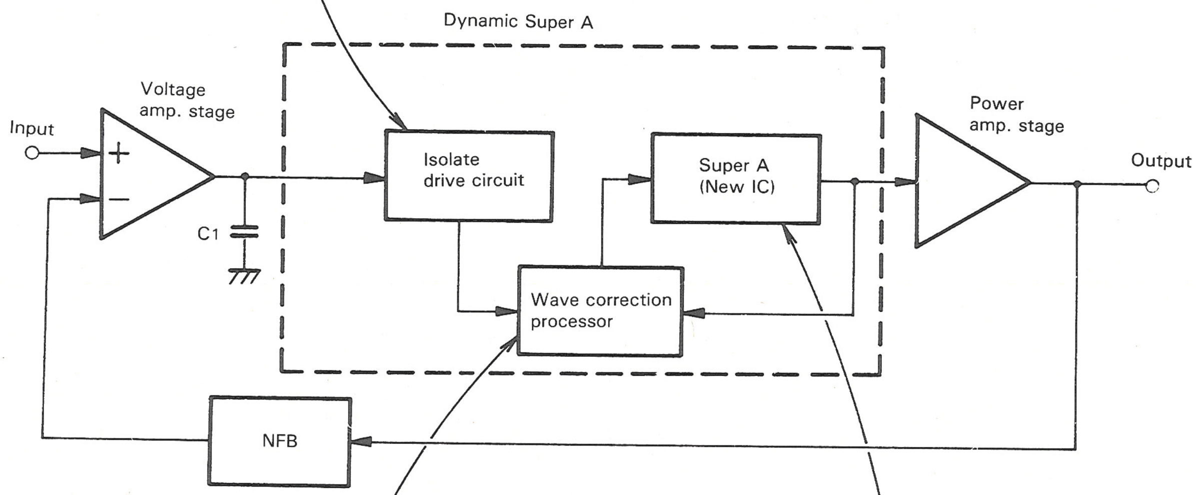
This basic configuration is as shown below.
Newly developed ''isolate drive circuit'' and ''wave correction circuit'' are added to the conventional Super A bias circuit. In addition, newly developed IC exclusive for Dynamic Super A is employed in the Super A bias circuit.

Isolate Drive Circuit

Purpose: Idealizes the interface between the voltage and power amplification stages.

Function: Drives the power stage at low impedance by FET independent of the output impedance of the voltage amplification stage.

Effect:
1. Always drives at low distortion without the influence of the speaker impedance.
2. Improves the absorption ability of the speaker counter electromotive force.



Wave Correction Processor

Purpose: Reduces the non-linear distortion of the transistors in the power stage.

Function: Corrects the signal to the power stage in advance.

Effect: Reduces the distortion by 20-40 dB more than the conventional processor. Thus, this amplifier can be said to be the non-feedback amplifier.

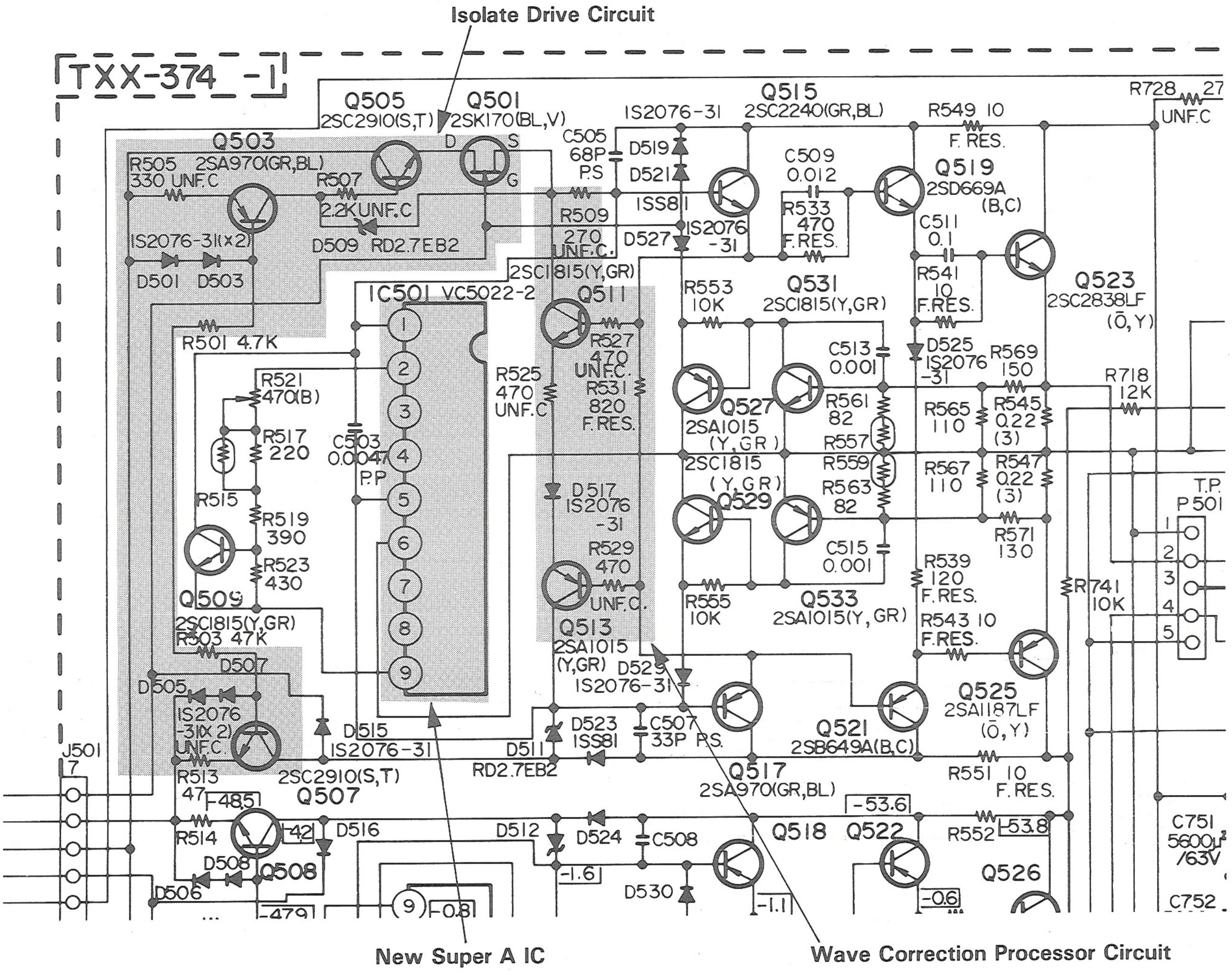
New Super A IC

Newly developed monolithic IC exclusive for Dynamic Super A which improves further the current linearity and high-speed response ability as compared with the conventional Super A IC.

Fig. 1 Block Diagram of Dynamic Super A

2-(2) "Dynamic Super A" Circuit Operation

1. Isolate Drive Circuit
   This circuit is basically an FET source-follower circuit. In A-X55, adequate dielectric strength is assured by the cascode connection between Q501 2SK170 (BL, V) and Q505.
   Q503 is a constant current circuit which determines the current flowing in zener diode D509 RD2.7EB2 which determines the cascode voltage of Q501 and Q505.
   Q507 is a constant current circuit which determines the current flowing in Q501.
2. Wave Correction Processor Circuit
   This circuit decreases the non-linear distortion in the power stage. It converts into a current the non-linear distortion voltage detected by emitters of Q515 2SC2240 (GR, BL) and Q517 2SA970 (GR, BL). This conversion current is applied across R509 (270Ω) to the input signal in anti-phase to deny the distortion.
   Thus, the distortion is reduced by 20-40 dB.
3. New Super A IC
   The basic operation of this IC is the same as that of the conventional Super A IC. This new Super A IC is a monolithic IC exclusive for Dynamic Super A with further improved current linearity and faster response.,



Isolate Drive Circuit

New Super A IC

Wave Correction Processor Circuit

TXX-374 -1
Q505 2SC2910(S,T)
Q501 2SK170(BL,V)
D S G
Q503 2SA970(GR,BL)
R505 330 UNF.C
R507 2.2K UNF.C
D509 RD2.7EB2
IS2076-31(×2)
D501 D503
C505 68P P.S
D519 D521
ISS81
R509 270 UNF.C.
D527 IS2076 -31
2SC1815(Y,GR)
Q511
IC501 VC5022-2
1 2 3 4 5 6 7 8 9
R501 4.7K
R521 470(B)
R517 220
C503 0.0047 P.P
R515
R519 390
R523 430
Q509 2SC1815(Y,GR)
R503 47K
D507
D505
IS2076 -31(×2) UNF.C.
R513 47
2SC2910(S,T) Q507
-48.5
-42
D515 IS2076-31
D516
R514
D508 Q508
D506
-47.9
J501 7
R525 470 UNF.C
R527 470 UNF.C.
R531 820 F.RES.
D517 IS2076 -31
R529 470 UNF.C.
Q513 2SA1015 (Y,GR)
D529 IS2076-31
D511 RD2.7EB2
D523 ISS81
C507 33P P.S.
D512
D524 C508
-1.6
D530
9 -0.8
Q515 2SC2240(GR,BL)
IS2076-31
C509 0.012
R533 470 F.RES.
R549 10 F.RES.
Q519 2SD669A (B,C)
C511 0.1
R541 10 F.RES.
R553 10K
Q531 2SC1815(Y,GR)
C513 0.001
D525 IS2076 -31
R569 150
Q527 2SA1015 (Y,GR)
R561 82
R557
R559
R563 82
2SC1815 (Y,GR) Q529
R565 110
R545 0.22 (3)
R567 110
R547 0.22 (3)
R571 130
C515 0.001
R555 10K
Q533 2SA1015(Y,GR)
R539 120 F.RES.
R543 10 F.RES.
Q525 2SA1187LF (O,Y)
Q521 2SB649A(B,C)
Q517 2SA970(GR,BL)
R551 10 F.RES.
-53.6
Q518 Q522
R552 -53.8
Q526
-1.1
-0.6
Q523 2SC2838LF (O,Y)
R728 27 UNF.C
R718 12K
T.P. P501
1 2 3 4 5
R741 10K
C751 5600μ /63V
C752

Fig. 2

3. Main Parts Location and Part Numbers

3-(1) Front View

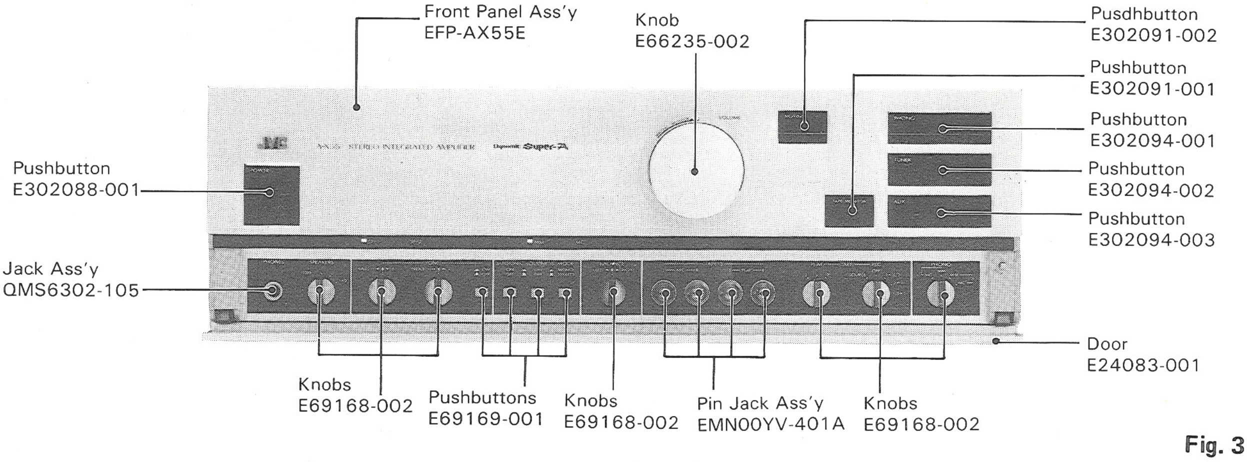

Front Panel Ass'y
EFP-AX55E
Knob
E66235-002
Pusdhbutton
E302091-002
Pushbutton
E302091-001
Pushbutton
E302094-001
Pushbutton
E302094-002
Pushbutton
E302094-003
Pushbutton
E302088-001
Jack Ass'y
QMS6302-105
Door
E24083-001
Knobs
E69168-002
Pushbuttons
E69169-001
Knobs
E69168-002
Pin Jack Ass'y
EMN00YV-401A
Knobs
E69168-002

Fig. 3

3-(2) Rear View

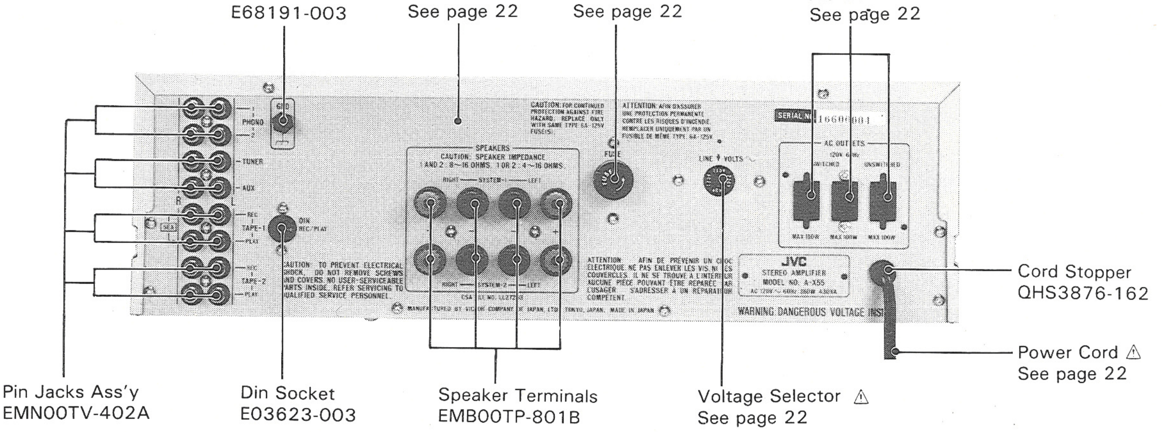

Earth Terminal
E68191-003
Rear Panel
See page 22
Fuse Socket ⚠
See page 22
AC Outlet ⚠
See page 22
Cord Stopper
QHS3876-162
Power Cord ⚠
See page 22
Pin Jacks Ass'y
EMN00TV-402A
Din Socket
E03623-003
Speaker Terminals
EMB00TP-801B
Voltage Selector ⚠
See page 22

Fig. 4

3-(3) Top View

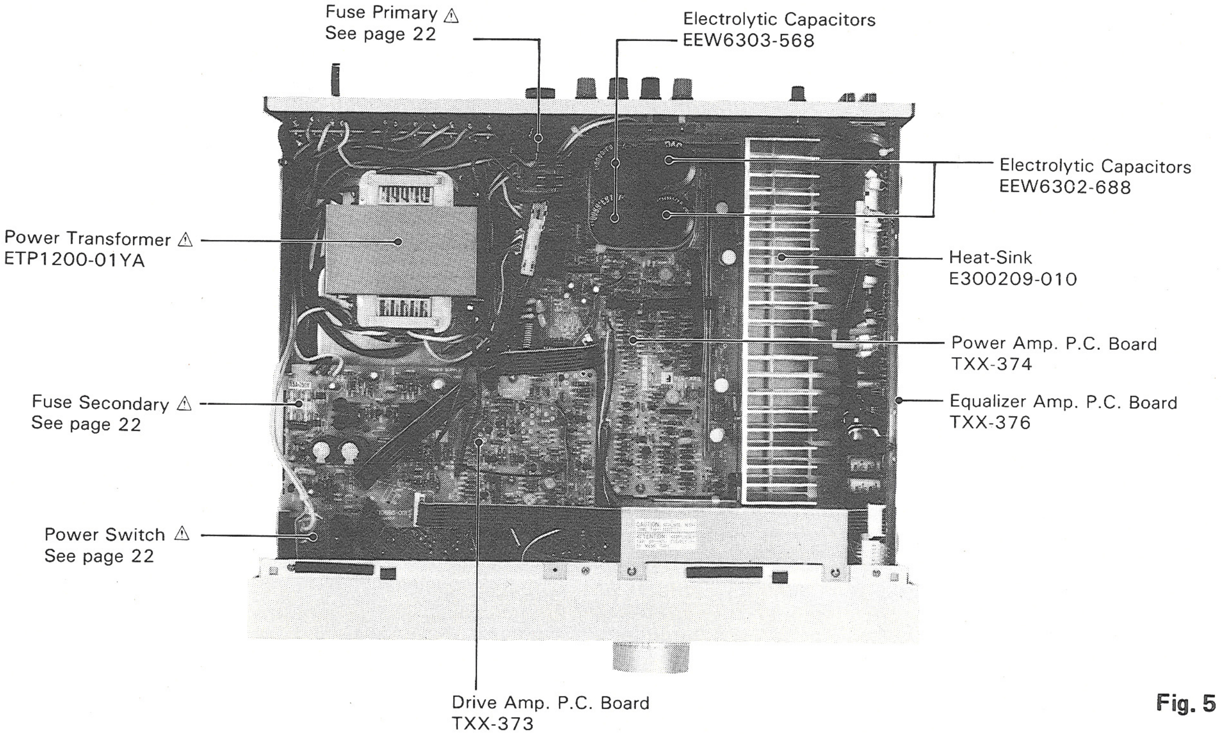

Fuse Primary ⚠
See page 22
Electrolytic Capacitors
EEW6303-568
Electrolytic Capacitors
EEW6302-688
Power Transformer ⚠
ETP1200-01YA
Heat-Sink
E300209-010
Power Amp. P.C. Board
TXX-374
Fuse Secondary ⚠
See page 22
Equalizer Amp. P.C. Board
TXX-376
Power Switch ⚠
See page 22
Drive Amp. P.C. Board
TXX-373

Fig. 5

4. Block Diagram

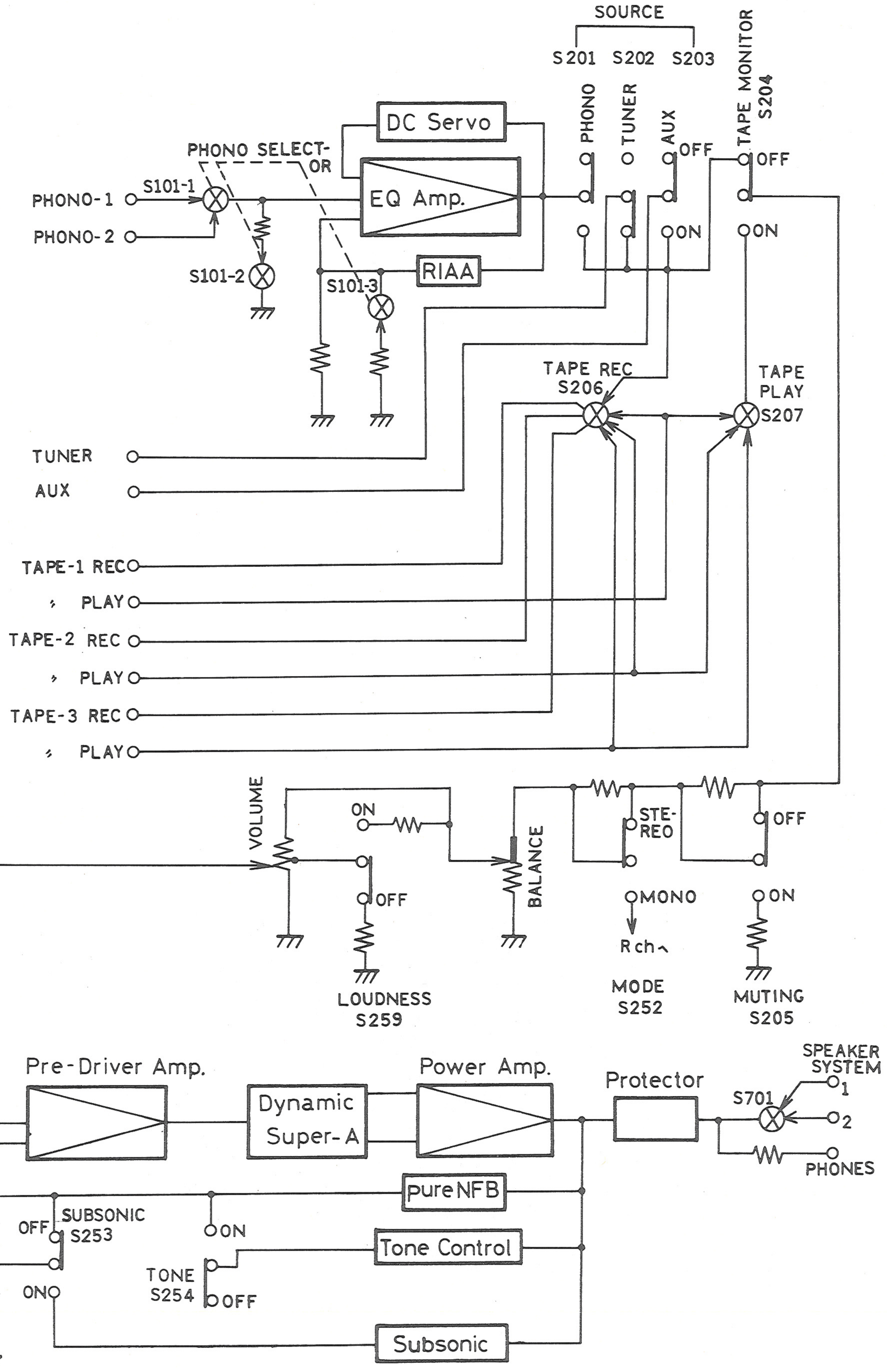

SOURCE
S201
S202
S203
PHONO
TUNER
AUX
OFF
ON
TAPE MONITOR S204
OFF
ON
DC Servo
PHONO SELECTOR
PHONO-1
PHONO-2
S101-1
EQ Amp.
S101-2
S101-3
RIAA
TAPE REC S206
TAPE PLAY S207
TUNER
AUX
TAPE-1 REC
〃 PLAY
TAPE-2 REC
〃 PLAY
TAPE-3 REC
〃 PLAY
VOLUME
ON
OFF
LOUDNESS S259
BALANCE
STEREO
MONO
Rch
MODE S252
OFF
ON
MUTING S205
Pre-Driver Amp.
Dynamic Super-A
Power Amp.
Protector
SPEAKER SYSTEM
S701
1
2
PHONES
pure NFB
OFF
SUBSONIC S253
ON
ON
Tone Control
TONE S254
OFF
Subsonic

Fig. 6

5. Exploded View and Part Numbers

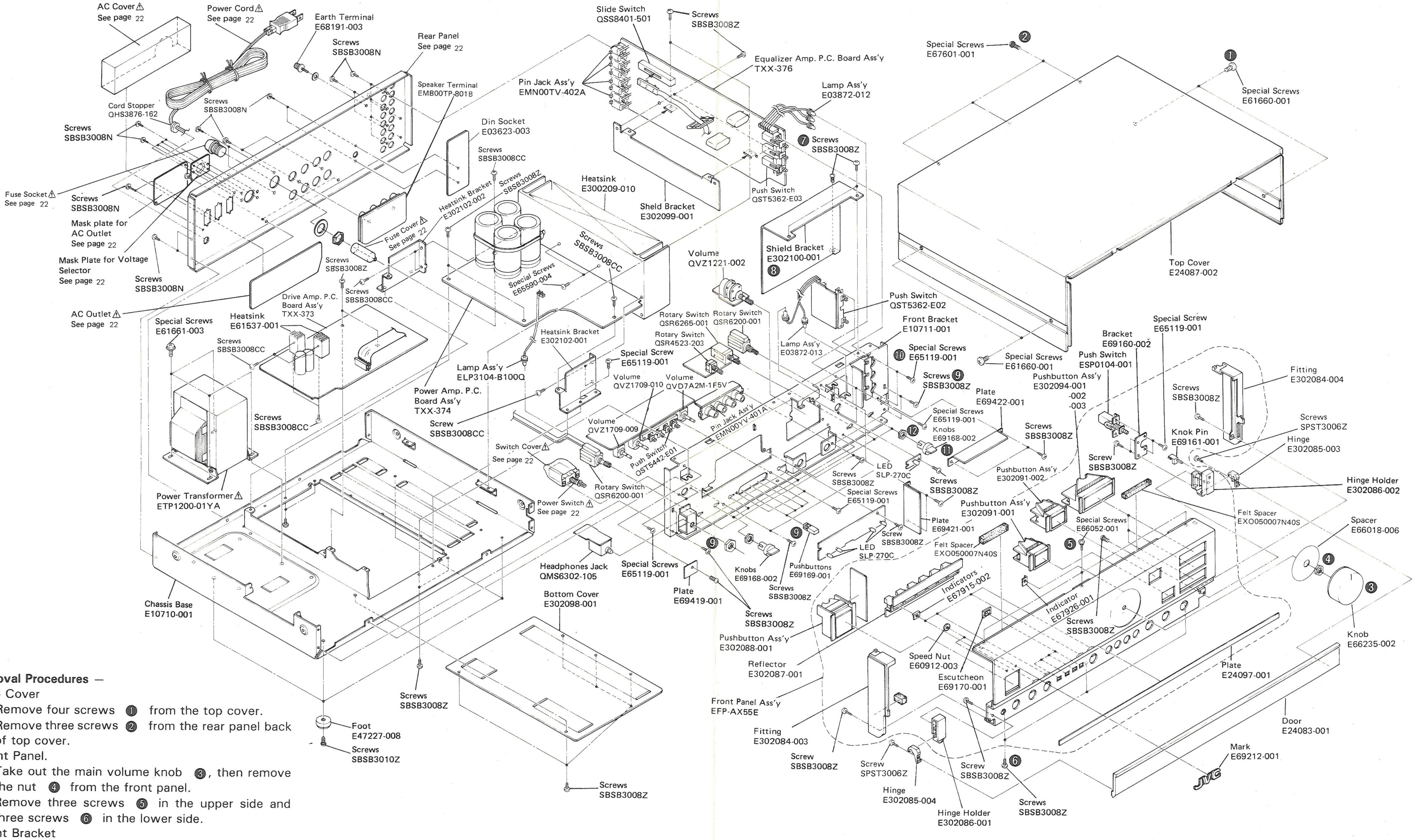

AC Cover⚠
See page 22
Power Cord⚠
See page 22
Earth Terminal
E68191-003
Screws
SBSB3008N
Rear Panel
See page 22
Cord Stopper
QHS3876-162
Screws
SBSB3008N
Speaker Terminal
EMB00TP-801B
Screws
SBSB3008N
Din Socket
E03623-003
Screws
SBSB3008CC
Fuse Socket⚠
See page 22
Screws
SBSB3008N
Mask plate for
AC Outlet
See page 22
Mask Plate for Voltage
Selector
See page 22
Screws
SBSB3008N
Heatsink Bracket
E302102-002
Screws
SBSB3008Z
Fuse Cover⚠
See page 22
Screws
SBSB3008Z
Screws
SBSB3008CC
Special Screws
E65590-004
Screws
SBSB3008CC
AC Outlet⚠
See page 22
Special Screws
E61661-003
Heatsink
E61537-001
Drive Amp. P.C.
Board Ass'y
TXX-373
Screws
SBSB3008CC
Screws
SBSB3008CC
Power Transformer⚠
ETP1200-01YA
Chassis Base
E10710-001
Lamp Ass'y
ELP3104-B100Q
Power Amp. P.C.
Board Ass'y
TXX-374
Screw
SBSB3008CC
Heatsink Bracket
E302102-001
Switch Cover⚠
See page 22
Power Switch⚠
See page 22
Screws
SBSB3008Z
Foot
E47227-008
Screws
SBSB3010Z
Headphones Jack
QMS6302-105
Bottom Cover
E302098-001
Screws
SBSB3008Z
Slide Switch
QSS8401-501
Screws
SBSB3008Z
Pin Jack Ass'y
EMN00TV-402A
Equalizer Amp. P.C. Board Ass'y
TXX-376
Lamp Ass'y
E03872-012
Heatsink
E300209-010
Sheld Bracket
E302099-001
⑦ Screws
SBSB3008Z
Push Switch
QST5362-E03
Shield Bracket
E302100-001
⑧
Volume
QVZ1221-002
Push Switch
QST5362-E02
Front Bracket
E10711-001
Rotary Switch
QSR6265-001
Rotary Switch
QSR6200-001
Rotary Switch
QSR4523-203
Lamp Ass'y
E03872-013
Special Screw
E65119-001
Volume
QVZ1709-010
Volume
QVD7A2M-1F5V
Pin Jack Ass'y
EMN00YV-401A
Volume
QVZ1709-009
Push Switch
QST5442-E01
Rotary Switch
QSR6200-001
⑩ Special Screws
E65119-001
Screws ⑨
SBSB3008Z
Special Screws
E61660-001
Special Screws
E65119-001
⑫ Knobs
E69168-002
⑪
Plate
E69422-001
Screws
SBSB3008Z
LED
SLP-270C
Screws
SBSB3008Z
Special Screws
E65119-001
Screws
SBSB3008Z
Plate
E69421-001
Screw
SBSB3008Z
LED
SLP-270C
Felt Spacer
EXO050007N40S
⑨
⑨
Special Screws
E65119-001
Plate
E69419-001
Knobs
E69168-002
Pushbuttons
E69169-001
Screws
SBSB3008Z
Screws
SBSB3008Z
Pushbutton Ass'y
E302088-001
Reflector
E302087-001
Front Panel Ass'y
EFP-AX55E
Fitting
E302084-003
Screw
SBSB3008Z
Screw
SPST3006Z
Hinge
E302085-004
Hinge Holder
E302086-001
Indicators
E67915-002
Speed Nut
E60912-003
Escutcheon
E69170-001
Screw
SBSB3008Z
⑥
Screws
SBSB3008Z
Special Screws ②
E67601-001
①
Special Screws
E61660-001
Top Cover
E24087-002
Special Screw
E65119-001
Bracket
E69160-002
Push Switch
ESP0104-001
Pushbutton Ass'y
E302094-001
-002
-003
Screws
SBSB3008Z
Knob Pin
E69161-001
Fitting
E302084-004
Screws
SPST3006Z
Hinge
E302085-003
Screw
SBSB3008Z
Pushbutton Ass'y
E302091-002
Pushbutton Ass'y
E302091-001
Special Screws
E66052-001
⑤
Hinge Holder
E302086-002
Felt Spacer
EXO050007N40S
Spacer
E66018-006
④
③
Indicator
E67926-001
Screws
SBSB3008Z
Knob
E66235-002
Plate
E24097-001
Door
E24083-001
Mark
E69212-001
JVC

Fig. 7

— **Removal Procedures** —

(1) Top Cover
   1. Remove four screws ① from the top cover.
   2. Remove three screws ② from the rear panel back of top cover.

(2) Front Panel.
   1. Take out the main volume knob ③, then remove the nut ④ from the front panel.
   2. Remove three screws ⑤ in the upper side and three screws ⑥ in the lower side.

(3) Front Bracket
   1. Remove the front panel. (See above)
   2. Remove three screws ⑦ from the shield cover ⑧.
   3. Remove six screws ⑨ from the front bracket.
   4. Remove two screws ⑩ from the push switch.
   5. Take out three knobs ⑪, then remove three nuts ⑫.

(4) Other Parts
   Remove the parts securing screws and plastic rivets, refering to this exploded view.

(Note) SBSB3008CC (coppered screw): for special use.
SBSB3008Z: for normal use.

6. Amplifier Adjustment Procedures

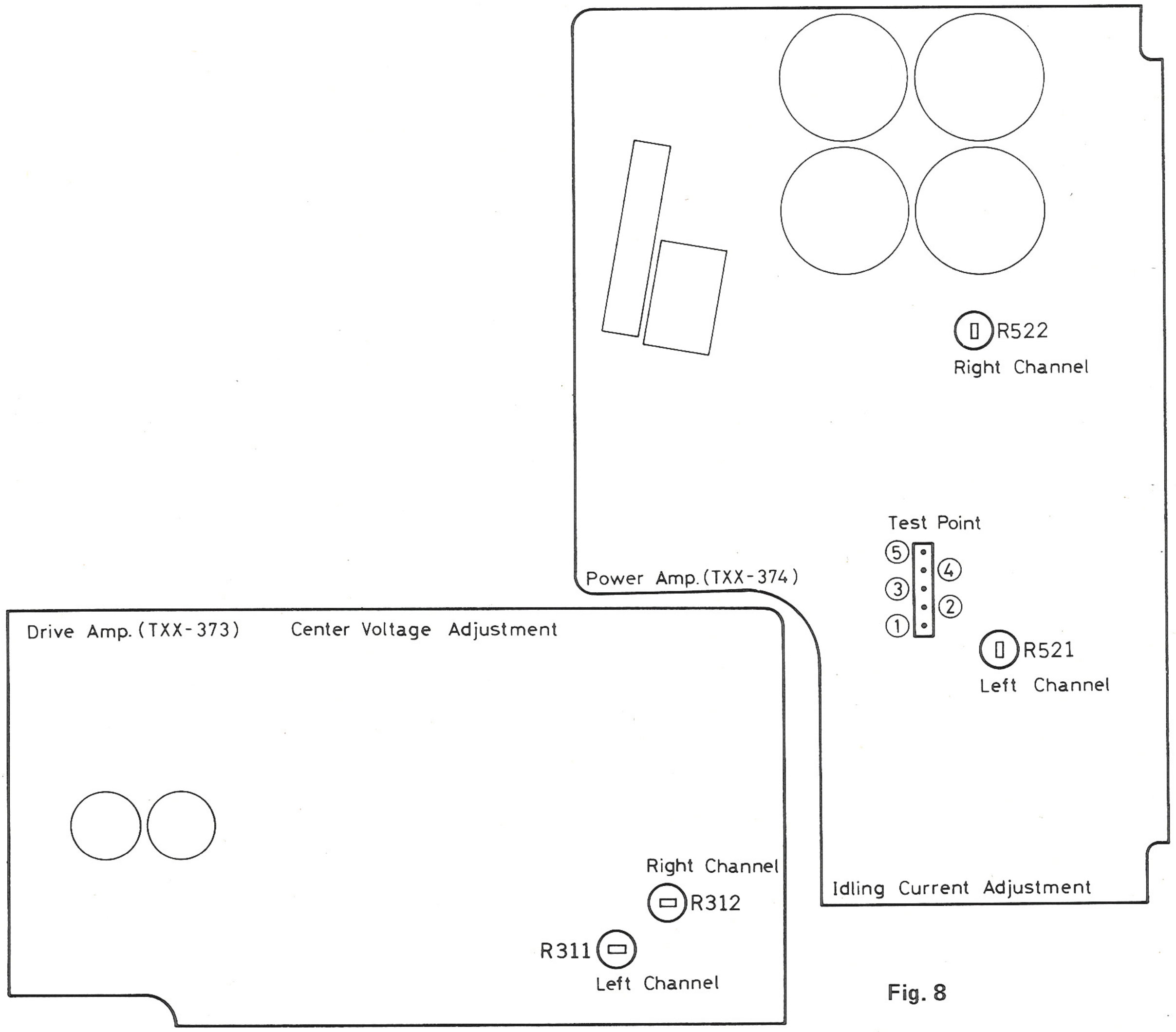

R522
Right Channel
Test Point
⑤
④
③
②
①
Power Amp.(TXX-374)
R521
Left Channel
Drive Amp.(TXX-373)
Center Voltage Adjustment
Right Channel
R312
R311
Left Channel
Idling Current Adjustment

Fig. 8

6-(1) Drive Amp. Center Voltage Adjustment

1. Before turning on the power, set the semi-fixed resistors (R311 for Left channel and R312 for Right channel) of the drive amplifier circuit board (TXX-373) to the center position.
2. Adjust the semi-fixed resistors (R311 and R312) so that the voltage at the following test points of the power amplifier circuit board (TXX-374) is within a range of ±10mV or less five minutes after the power is turned on.

   Left channel: Measure the voltage between test point ① and test point ③ (ground).

   Right channel: Measure the voltage between test point ⑤ and test point ③ (ground).

   The measurements can also be performed at the speaker terminals if the relay is operating normally.

6-(2) Power Amp. Idling Current Adjustment

1. Before turning on the power, turn the semi-fixed resistors (R521 for Left channel and R522 for Right channel) of the power amplifier circuit board fully counterclockwise.
2. Adjust the semi-fixed resistors (R521 and R522) so that the voltage at the following test points of the power amplifier circuit board is within a range of 9mV ~ 13mV after the power is turned on.

   Left channel: Measure the voltage between test point ② (emitter of Q523) and output at the test point ①.

   Right channel: Measure the voltage between test point ④ (emitter of Q524) and output at the test point ⑤.
3. Readjust resistors R521 and R522 about five minutes after the power is turned on (the heat-sink temperature must be sufficiently high) so that the voltage at the test points becomes 11mV. Confirm that the voltage does not vary when the heat-sink temperature increases further.

   Note: Be sure to perform the measurement with the probes and cabinet of the measuring equipment separated from the grounding terminals of A-X55 or of other measuring equipment.

7. Printed Circuit Board Ass'y and Parts List

7-(1) TXX-376 Equalizer Amp. P.C. Board Ass'y

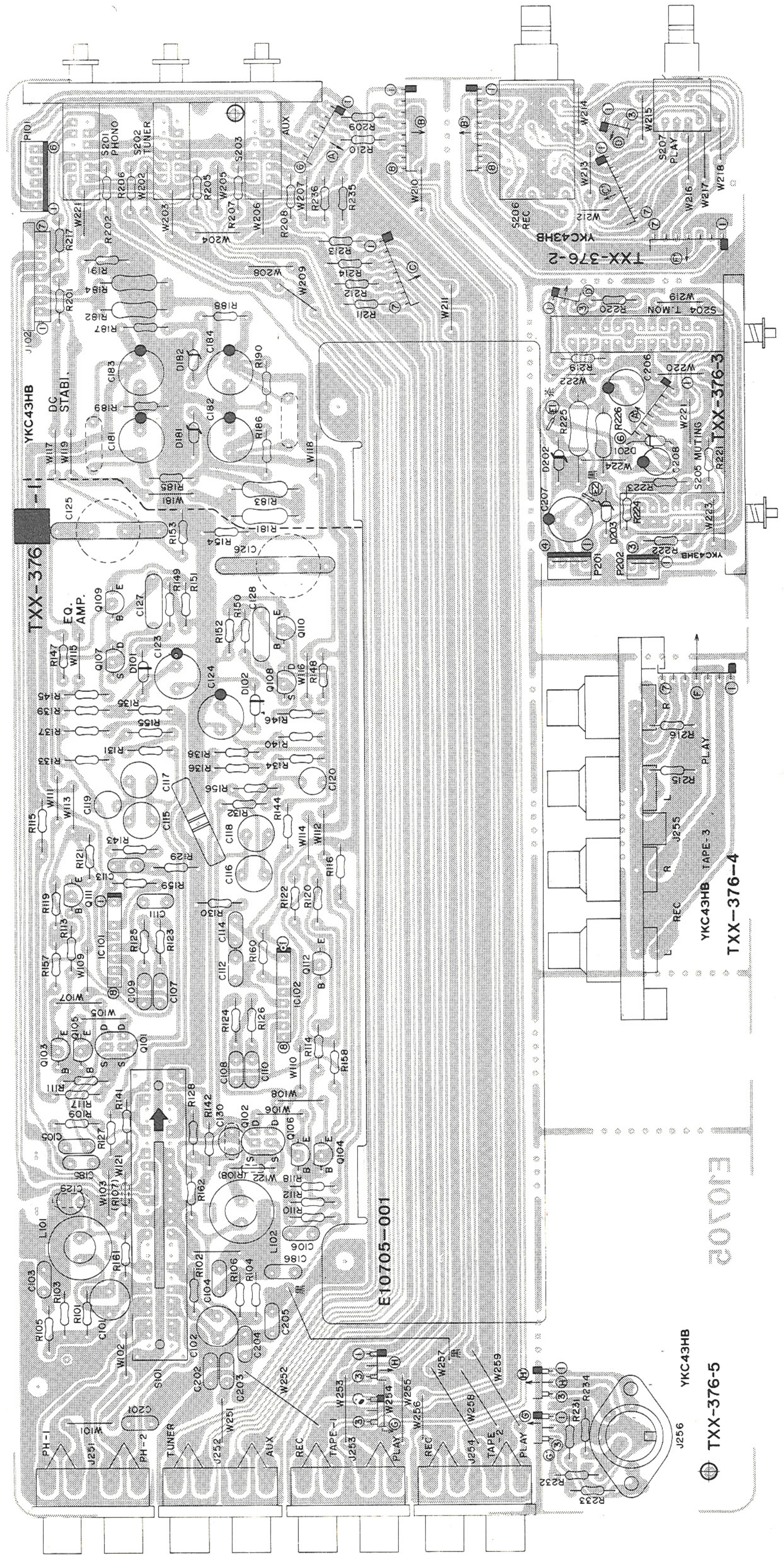

TXX-376
EQ. AMP.
TXX-376-2
TXX-376-3
TXX-376-4
TXX-376-5
YKC43HB
E10705-001
DC STABI.
PH-1
PH-2
TUNER
AUX
REC
PLAY
TAPE-1
TAPE-3
MUTING
PHONO

Fig. 9

Transistors

Item No.	Part Number	Rating	Description	
				Maker
Q101	2SK240V(BL,V)		F.E.T.	
Q102	2SK240V(BL,V)		"	
Q103	2SC2240(GR,BL)		Silicon	Toshiba
Q104	2SC2240(GR,BL)		"	"
Q105	2SC2240(GR,BL)		"	"
Q106	2SC2240(GR,BL)		"	"
Q107	2SK163(L1)		F.E.T.	NEC
Q108	2SK163(L1)		"	"
Q109	2SC1815(Y,GR)		Silicon	Toshiba
Q110	2SC1815(Y,GR)		"	"
Q111	2SA970(GR,BL)		"	"
Q112	2SA970(GR,BL)		"	"

Integrated Circuits

Item No.	Part Number	Rating	Description	
				Maker
IC101	HA12017		I.C.	Hitachi
IC102	HA12017		I.C.	"

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D181	RD27EB3		Silicon (Zener)	NEC
D182	RD27EB3		"(Zener)	"
D201	RD11EB3		"(Zener)	"
D202	RD10EB3		"(Zener)	"
D203	RD10EB3		"(Zener)	"

Coils

Item No.	Part Number	Rating	Description
L101	EQL0111-151		Inductor (for W.Germany)
L102	EQL0111-151		Inductor (for W.Germany)

Capacitors

Item No.	Part Number	Rating		Description
C101	QFS81HJ-123	0.012µF	50V	Polystyrene
C101	QFS81HJ-471	470pF	50V	" (for W.Germany)
C102	QFS81HJ-123	0.012µF	50V	Polystyrene
C102	QFS81HJ-471	470pF	50V	Polystyrene (for W.Germany)
C103	QFP31HJ-151	150pF	50V	Polypropylene (Except W.Germany)
C104	QFP31HJ-151	150pF	50V	Polypropylene (Except W.Germany)
C105	QFM81HJ-472	4700pF	50V	Mylar
C106	QFM81HJ-472	4700pF	50V	"
C107	QFM81HJ-472	4700pF	50V	"
C108	QFM81HJ-472	4700pF	50V	"
C109	QFM81HJ-103	0.01µF	50V	"
C110	QFM81HJ-103	0.01µF	50V	"
C111	QFP31HJ-101	100pF	50V	Polypropylene
C112	QFP31HJ-101	100pF	50V	"
C113	QFP31HJ-471	470pF	50V	"

Capacitors

Item No.	Part Number	Rating		Description
C114	QFP31HJ-471	470pF	50V	Polypropylene
C115	QFS81HG-822	8200pF	50V	Polystyrene
C116	QFS81HG-822	8200pF	50V	"
C117	QFS81HG-822	8200pF	50V	"
C118	QFS81HG-822	8200pF	50V	"
C119	QFS81HG-472	4700pF	50V	"
C120	QFS81HG-472	4700pF	50V	"
C123	QET51AR-477H	470µF	10V	Electrotic
C124	QET51AR-477H	470µF	10V	"
C125	EFZ0089-475	4.7µF		Metallized Mylar
C126	EFZ0089-475	4.7µF		"
C127	EFZ0089-474	0.47µF		"
C128	EFZ0089-474	0.47µF		"
C129	QFP31HJ-471	470pF	50V	Polypropylene (for W.Germany)
C129	QFS81HJ-470	47pF	50V	Polystyrene
C130	QFP31HJ-471	470pF	50V	Polypropyrene (for W.Germany)
C130	QFS81HJ-470	47pF	50V	Polystyrene
C131	QFP31HJ-101	100pF	50V	Polypropylene (for W.Germany)
C132	QFP31HJ-101	100pF	50V	Polypropylene (for W.Germany)
C181	QET51VR-227H	220µF	35V	Electrotic
C182	QET51VR-227H	220µF	35V	Electrolytic
C183	QET51VR-227H	220µF	35V	"
C184	QET51VR-227H	220µF	35V	"
C185	QFM81HK-473	0.047µF	50V	Mylar
C186	QFM81HK-473	0.047µF	50V	"
C201	QFM81HK-103	0.01µF	50V	"
C202	QFM81HK-103	0.01µF	50V	"
C203	QFM81HK-103	0.01µF	50V	"
C204	QFM81HK-103	0.01µF	50V	"
C205	QFM81HK-103	0.01µF	50V	"
C206	QET51CR-107H	100µF	16V	Electrolytic
C207	QET51CR-227H	220µF	16V	"
C208	QET51CR-476H	47µF	16V	"

Resistors

Item No.	Part Number	Rating		Description
R101	QRD141J-101S	100Ω	1/4W	Carbon
R102	QRD141J-101S	100Ω	1/4W	"
R103	QRD141J-473S	47kΩ	1/4W	"
R104	QRD141J-473S	47kΩ	1/4W	"
R105	QRD148J-471S	470Ω	1/4W	" (Except W.Germany)
R106	QRD148J-471S	470Ω	1/4W	Carbon (Except W.Germany)
R107	QRD148J-5R6S	5.6Ω	1/4W	Carbon (for W.Germany)
R108	QRD148J-5R6S	5.6Ω	1/4W	Carbon (for W.Germany)
R109	QRD141J-331S	330Ω	1/4W	Carbon
R110	QRD141J-331S	330Ω	1/4W	"
R111	QRD141J-153S	15kΩ	1/4W	"
R112	QRD141J-153S	15kΩ	1/4W	"
R113	QRD141J-823S	82kΩ	1/4W	"
R114	QRD141J-823S	82kΩ	1/4W	"
R115	QRD141J-162S	1.6kΩ	1/4W	"
R116	QRD141J-162S	1.6kΩ	1/4W	"
R117	QRD141J-162S	1.6kΩ	1/4W	"
R118	QRD141J-162S	1.6kΩ	1/4W	"
R119	QRD141J-621S	620Ω	1/4W	"
R120	QRD141J-621S	620Ω	1/4W	"

Resistors

Item No.	Part Number	Rating		Description
R121	QRD141J-621S	620Ω	1/4W	Carbon
R122	QRD141J-621S	620Ω	"	"
R123	QRD141J-560S	56Ω	"	"
R124	QRD141J-560S	56Ω	"	"
R125	QRD141J-681S	680Ω	"	"
R126	QRD141J-681S	680Ω	"	"
R127	QRD141J-331S	330Ω	"	"
R128	QRD141J-331S	330Ω	"	"
R129	QRD141J-911S	910Ω	"	"
R130	QRD141J-911S	910Ω	"	"
R131	QRD141J-184S	180kΩ	"	"
R132	QRD141J-184S	180kΩ	"	"
R133	QRD141J-163S	16kΩ	"	"
R134	QRD141J-163S	16kΩ	"	"
R135	QRD141J-222S	2.2kΩ	"	"
R136	QRD141J-222S	2.2kΩ	"	"
R137	QRD141J-205S	2kΩ	"	"
R138	QRD141J-205S	2kΩ	"	"
R139	QRD141J-133S	13kΩ	"	"
R140	QRD141J-135S	13kΩ	"	"
R141	QRD141J-240S	24Ω	"	"
R142	QRD141J-240S	24Ω	"	"
R143	QRD141J-220S	22Ω	"	"
R144	QRD141J-220S	22Ω	"	"
R145	QRD141J-475S	4.7MΩ	"	"
R146	QRD141J-475S	4.7MΩ	"	"
R147	QRD141J-683S	68kΩ	"	"
R148	QRD141J-683S	68kΩ	"	"
R149	QRD141J-182S	1.8kΩ	"	"
R150	QRD141J-182S	1.8kΩ	"	"
R151	QRD141J-752S	7.5kΩ	"	"
R152	QRD141J-752S	7.5kΩ	"	"
R153	QRD141J-224S	220kΩ	"	"
R154	QRD141J-224S	220kΩ	"	"
R155	QRD141J-123S	12kΩ	"	"
R156	QRD141J-123S	12kΩ	"	"
R157	QRD141J-102S	1kΩ	"	"
R158	QRD141J-102S	1kΩ	"	"
R159	QRD141J-433S	43kΩ	"	"
R160	QRD141J-433S	43kΩ	"	"
R161	QRD148J-152S	1.5kΩ	"	Carbon (for W.Germany)
R161	QRD148J-5R6S	5.6Ω	"	Carbon
R162	QRD148J-152S	1.5kΩ	"	Carbon (for W.Germany)
R162	QRD148J-5R6S	5.6Ω	"	Carbon
R181	QRG017J-152S	1.5kΩ	1W	Oxied Metal Film ⚠
R182	QRG017J-152S	1.5kΩ	"	"
R183	QRG017J-152S	1.5kΩ	"	"
R184	QRG017J-152S	1.5kΩ	"	"
R185	QRD141J-101S	100Ω	1/4W	Carbon
R186	QRD141J-101S	100Ω	"	"
R187	QRD141J-101S	100Ω	"	"
R188	QRD141J-101S	100Ω	"	"
R189	QRD141J-223S	22kΩ	"	"
R190	QRD141J-223S	22kΩ	"	"
R201	QRD141J-331S	330Ω	"	"
R202	QRD141J-331S	330Ω	"	"
R205	QRD141J-331S	330Ω	"	"
R206	QRD141J-331S	330Ω	"	"
R207	QRD141J-331S	330Ω	"	"
R208	QRD141J-331S	330Ω	"	"
R209	QRD141J-331S	330Ω	"	"
R210	QRD141J-331S	330Ω	"	"
R211	QRD141J-105S	1MΩ	"	"
R212	QRD141J-105S	1MΩ	"	"
R213	QRD141J-105S	1MΩ	"	"
R214	QRD141J-105S	1MΩ	"	"
R215	QRD141J-105S	1MΩ	"	"

Resistors

Item No.	Part Number	Rating		Description
R216	QRD141J-105S	1MΩ	1/4W	Carbon
R217	QRD141J-680S	68Ω	"	"
R219	QRD141J-331S	330Ω	"	"
R220	QRD141J-331S	330Ω	"	"
R221	QRD141J-823S	82kΩ	"	"
R222	QRD141J-823S	82kΩ	"	"
R223	QRD141J-103S	10kΩ	"	"
R224	QRD141J-103S	10kΩ	"	"
R225	QRG027J-270	27Ω	2W	Oxied Metal Film ⚠
R226	QRG017J-150S	15Ω	1W	"
R231	QRD148J-334S	330kΩ	"	Carbon
R232	QRD148J-334S	330kΩ	"	"
R233	QRD148J-104S	100kΩ	"	"
R234	QRD141J-104S	100kΩ	"	"
R235	QRD141J-105S	1MΩ	"	"
R236	QRD141J-105S	1MΩ	"	"

⚠ : Safety Parts

Others

Item No.	Part Number	Rating	Description
	E10705-001		Circuit Board
	E302099-001		Shield Bracket
	SBSB3008Z		Tapping Screw
	E03532-001		Shield Case (for W.Germany)
J102	E04365-007		Formed Wire
			Socket
J251	EMN00TV-402A		Pin Jack Assy
J252	EMN00TV-402A		Pin Jack Assy
J253	EMN00TV-402A		Pin Jack Assy
J254	EMN00TV-402A		Pin Jack Assy
J255	EMN00YV-401A		Pin Jack Assy
J256	E03623-003		Din Socket
P101	QMV5005-006		6P Plug Assy
P201	QMV5005-004		4P Plug Assy
P202	QMV5005-003		3P Plug Assy
P203	QMV5005-009		9P Plug Assy
S101	QSS8401-501		Slide Switch
S201	QST5362-E03		Push Switch
S204	QST5362-E02		Push Switch
S206	QSR6265-001		Rotary Switch
S207	QSR4523-203		Rotary Switch

7-(2) TXX-373 Drive Amp. P.C. Board Ass'y

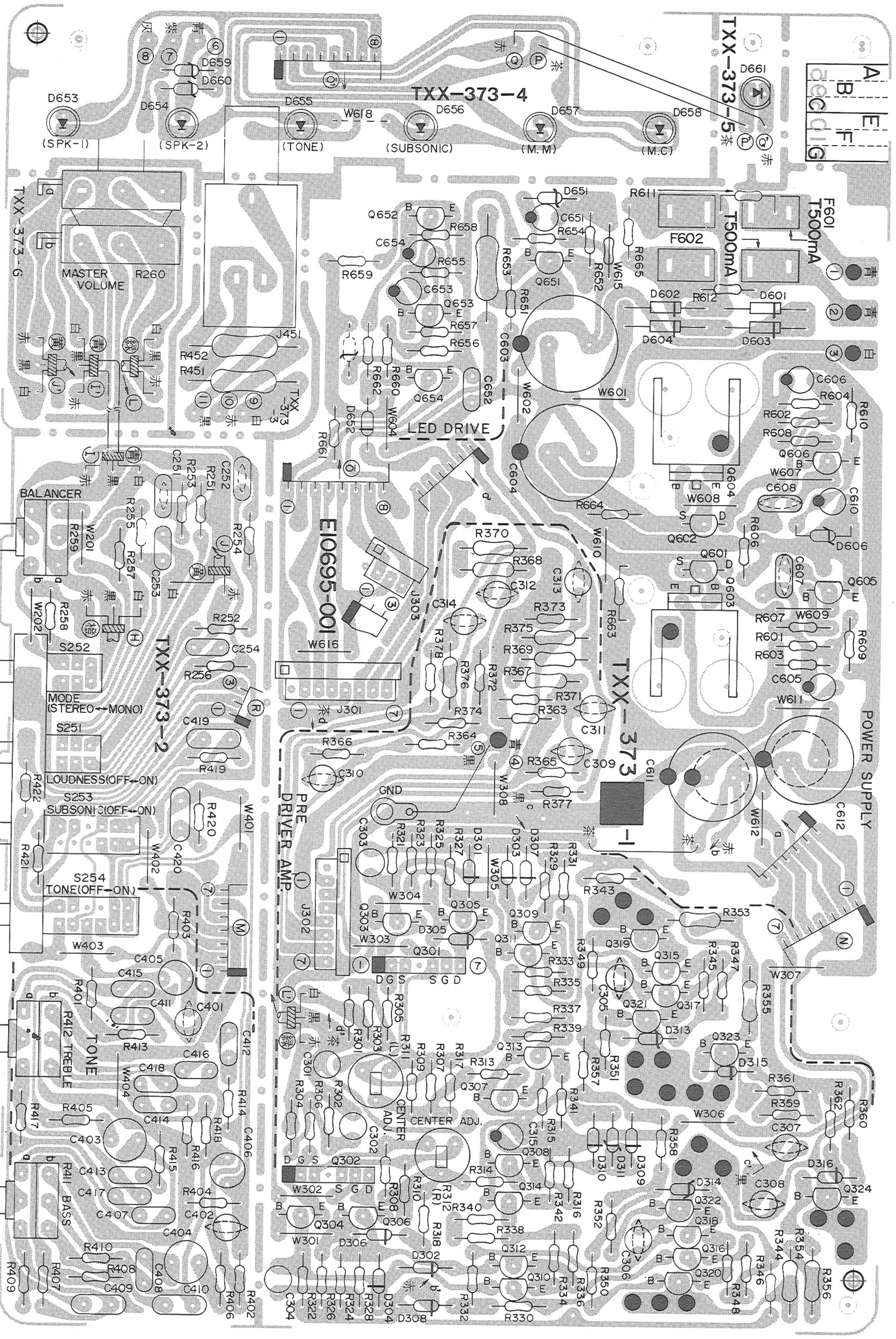

TXX-373-4
TXX-373-5
TXX-373-6
TXX-373-2
TXX-373
E10695-001
LED DRIVE
PRE DRIVER AMP
POWER SUPPLY
MASTER VOLUME
BALANCER
MODE (STEREO↔MONO)
LOUDNESS(OFF↔ON)
SUBSONIC(OFF↔ON)
TONE(OFF↔ON)
TONE TREBLE
BASS
CENTER ADJ.
F601 T500mA
F602
(SPK-1)
(SPK-2)
(TONE)
(SUBSONIC)
(M.M)
(M.C)
GND

Fig. 10

Transistors

Item No.	Part Number	Rating	Description	
				Maker
Q301	2SK150A(GR,BL)		F.E.T.	Toshiba
Q302	2SK150A(GR,BL)		"	"
Q303	2SC1815(Y,GR)		Silicon	"
Q304	2SC1815(Y,GR)		"	"
Q305	1SC1815(Y,GR)		"	"
Q306	2SC1815(Y,GR)		"	"
Q307	2SC1815(Y,GR)		"	"
Q308	2SC1815(Y,GR)		"	"
Q309	2SC458(C,D)		"	Hitachi
Q310	2SC458(C,D)		"	"
Q311	2SC458(C,D)		"	"
Q312	2SC458(C,D)		"	"
Q313	2SC2240(GR,BL)		"	Toshiba
Q314	2SC2240(GR,BL)		"	"
Q315	2SA1029(C,D)		"	Hitachi
Q316	2SA1029(C,D)		"	"
Q317	2SA1029(C,D)		"	"
Q318	2SA1029(C,D)		"	"
Q319	2SA970(GR,BL)		"	Toshiba
Q320	2SA970(GR,BL)		"	"
Q321	2SA970(GR,BL)		"	"
Q322	2SA970(GR,BL)		"	"
Q323	2SC2910(S,T)		"	Sanyo
Q324	2SC2910(S,T)		"	"
Q601	2SK246(GR)		F.E.T.	Toshiba
Q602	2SK246(GR)		"	"
Q603	2SD313V(D,E)		Silicon	Sanyo
Q604	2SB507V(D,E)		"	"
Q605	2SC2240(GR,BL)		"	Toshiba
Q606	2SA970(GR,BL)		"	"
Q651	2SA965(O,Y)		"	"
Q652	2SC1815(Y,GR)		"	"
Q653	2SC1815(Y,GR)		"	"
Q654	2SC1815(Y,GR)		"	"

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D301	1S2076-31		Silicon	Hitachi
D302	1S2076-31		"	"
D303	1S2076-31		"	"
D304	1S2076-31		"	"
D305	1S2076-31		"	"
D306	1S2076-31		"	"
D307	1S2076-31		"	"
D308	1S2076-31		"	"
D309	1S2076-31		"	"
D310	1S2076-31		"	"
D311	RD6.2EB3		"(Zener)	NEC
D313	RD2.7EB2		"(")	"
D314	RD2.7EB2		"(")	"
D315	1S2076-31		"	Hitachi
D316	1S2076-31		"	"
D601	10DF2FD		"	Nippon Inter ⚠
D602	10DF2FD		"	"
D603	10DF2FD		"	"
D604	10DF2FD		"	"
D606	RD5.6EB3		"(Zener)	NEC
D651	RD5.6EB3		"(")	"
D652	1S2076-31		"	Hitachi
D653	SLP-270C		L.E.D.	Sanyo
D654	SLP-270C		"	"
D657	SLP-270C		"	"
D658	SLP-270C		"	"
D659	RD2.7EB2		Silicon (Zener)	NEC
D660	RD2.7EB2		"(")	"
D661	SLP-270C		L.E.D.	Sanyo

Capacitors

Item No.	Part Number	Rating		Description
C251	QCS21HJ-331	330pF	50V	Ceramic
C252	QCS21HJ-331	330pF	"	"
C253	QFM81HJ-273	0.027μF	"	Mylar
C254	QFM81HJ-273	0.027μF	"	"
C301	QFS81HJ-330	33pF	"	Polystyrene
C302	QFS81HJ-330	33pF	"	"
C303	QFS81HJ-331	330pF	"	"
C304	QFS81HJ-331	330pF	"	"
C305	QCS22HJ-4R0	4pF	500V	Ceramic
C306	QCS22HJ-4R0	4pF	"	"
C307	QCS22HJ-330	33pF	"	"
C308	QCS22HJ-330	33pF	"	"
C309	QCS21HJ-680	68pF	50V	"
C310	QCS21HJ-680	68pF	"	"
C311	QCS21HJ-220	22pF	"	"
C312	QCS21HJ-220	22pF	"	"
C313	QCS21HJ-220	22pF	"	"
C314	QCS21HJ-220	22pF	"	"
C315	QET51HR-105H	1.5μF	"	Electrolytic
C401	QCS21HJ-820	82pF	"	Ceramic
C402	QCS21HJ-820	82pF	"	"
C403	QEZ0046-475	4.7μF	"	N.P.Electrolytic
C404	QEZ0046-475	4.7μF	"	"
C405	QEZ0046-225	2.2μF	"	"
C406	QEZ0046-225	2.2μF	"	"
C407	QFM81HJ-183	0.018μF	"	Mylar
C408	QFM81HJ-183	0.018μF	"	"
C409	QFM81HJ-184	0.18μF	"	"
C410	QFM81HJ-184	0.18μF	"	"
C411	QFM81HJ-332	3300pF	"	"
C412	QFM81HJ-332	3300pF	"	"
C413	QFM81HJ-333	0.033μF	"	"
C414	QFM81HJ-333	0.033μF	"	"
C415	QFP31HJ-391	390pF	"	Polypropylene
C416	QFP31HJ-391	390pF	"	"
C417	QFP31HJ-432	4300pF	"	"
C418	QFP31HJ-432	4300pF	"	"
C419	QFM81HJ-274	0.27μF	"	Mylar
C420	QFM81HJ-274	0.27μF	"	"
C603	QET52AR-477E	270μF	100V	Electrolytic
C604	QET52AR-477E	270μF	"	"
C605	QET51JR-225H	2.2μF	63V	"
C606	QET51JR-225H	2.2μF	"	"
C607	QCS21HJ-101	100pF	50V	Ceramic
C608	QCS21HJ-101	100pF	"	"
C610	QET51CR-476H	47μF	16V	Electrolytic
C611	QET51JR-107H	100μF	63V	"
C612	QET51JR-107H	100μF	"	"
C651	QET51HR-225H	2.2μF	50V	"
C652	QFM81HJ-473	0.47μF	150V	Mylar
C653	QET51HR-225H	2.2μF	50V	Electrolytic
C654	QET51HR-225H	2.2μF	"	"

Resistors

Item No.	Part Number	Rating		Description
R251	QRD141J-333S	33kΩ	1/4W	Carbon
R252	QRD141J-333S	33kΩ	"	"
R253	QRD141J-105S	1MΩ	"	"
R254	QRD141J-105S	1MΩ	"	"
R255	QRD141J-203S	20kΩ	"	"
R256	QRD141J-203S	20kΩ	"	"
R257	QRD141J-472S	4.7kΩ	"	"
R258	QRD141J-472S	4.7kΩ	"	"
R259	QVD7A2M-1F5V	250kΩ		Variable
R260	QVZ1221-002	100kΩ		"

Resistors

Item No.	Part Number	Rating		Description
R301	QRD141J-105S	1MΩ	1/4W	Carbon
R302	QRD141J-105S	"	"	"
R303	QRD141J-151S	150Ω	"	"
R304	QRD141J-151S	"	"	"
R305	QRD141J-470S	47Ω		"
R306	QRD141J-470S	"		"
R307	QRD141J-220S	22Ω	"	"
R308	QRD141J-220S	"	"	"
R309	QRD141J-220S	"	"	"
R310	QRD141J-220S	"	"	"
R311	QVP4A0B-101	100Ω		Variable
R312	QVP4A0B-101	"		"
R313	QRD141J-123S	12kΩ	1/4W	Carbon
R314	QRD141J-123S	"	"	"
R315	QRD141J-222S	2.2kΩ	"	"
R316	QRD141J-222S	"	"	"
R317	QRD141J-223S	22kΩ	"	"
R318	QRD141J-223S	"	"	"
R321	QRD141J-682S	6.8kΩ	"	"
R322	QRD141J-682S	"	"	"
R323	QRD141J-682S	"	"	"
R324	QRD141J-682S	"	"	"
R325	QRD141J-154S	150kΩ	"	"
R326	QRD141J-154S	"	"	"
R327	QRD141J-221S	220Ω	"	"
R328	QRD141J-221S	"	"	"
R329	QRD141J-681S	680Ω	"	"
R330	QRD141J-681S	"	"	"
R331	QRD141J-681S	"	"	"
R332	QRD141J-681S	"	"	"
R333	QRD141J-391S	390Ω	"	"
R334	QRD141J-391S	"	"	"
R335	QRD141J-391S	"	"	"
R336	QRD141J-391S	"	"	"
R337	QRD148J-512S	5.1kΩ	"	"
R338	QRD148J-512S	"	"	"
R339	QRD148J-512S	"	"	"
R340	QRD148J-512S	"	"	"
R341	QRD141J-152S	1.5kΩ	"	"
R342	QRD141J-152S	"	"	"
R343	QRD149J-121S	120Ω	"	UNF. Carbon ⚠
R344	QRD149J-121S	"	"	"
R345	QRD141J-5R6S	5.6Ω	"	Carbon
R346	QRD141J-5R6S	"	"	"
R347	QRD141J-5R6S	"	"	"
R348	QRD141J-5R6S	"	"	"
R349	QRD141J-151S	150Ω	"	"
R350	QRD141J-151S	"	"	"
R351	QRD141J-151S	"	"	"
R352	QRD141J-151S	"	"	"
R353	QRD129J-472	4.7kΩ	1/2W	UNF. Carbon ⚠
R354	QRD129J-472	"	"	"
R355	QRD129J-472	"	"	"
R356	QRD129J-472	"	"	"
R357	QRD141J-104S	100kΩ	1/4W	Carbon
R358	QRD141J-104S	"	"	"
R359	QRD149J-221S	220Ω	"	UNF. Carbon ⚠
R360	QRD149J-221S	"	"	"
R361	QRD149J-221S	"	"	"
R362	QRD149J-221S	"	"	"
R363	QRD141J-471S	470Ω	"	Carbon
R364	QRD141J-471S	"	"	"
R365	QRD141J-472S	4.7kΩ	"	"
R366	QRD141J-472S	"	"	"
R367	QRD129J-122	1.2kΩ	1/2W	UNF. Carbon ⚠
R368	QRD129J-122	"	"	"
R369	QRD129J-272	2.7kΩ	"	"
R370	QRD129J-272	"	"	"
R371	QRD148J-301S	300Ω	1/4W	Carbon
R372	QRD148J-301S	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R373	QRD148J-301S	300Ω	1/4W	Carbon
R374	QRD148J-301S	"	"	"
R375	QRD129J-392	3.9kΩ	1/2W	UNF. Carbon ⚠
R376	QRD129J-392	"	"	"
R377	QRD141J-475S	4.7MΩ	1/4W	Carbon
R378	QRD141J-475S	"	"	"
R401	QRD141J-684S	680kΩ	"	"
R402	QRD141J-684S	"	"	"
R403	QRD141J-223S	22kΩ	"	"
R404	QRD141J-223S	"	"	"
R405	QRD141J-223S	"	"	"
R406	QRD141J-223S	"	"	"
R407	QRD141J-202S	2kΩ	"	"
R408	QRD141J-202S	"	"	"
R409	QRD141J-133S	13kΩ	"	"
R410	QRD141J-133S	"	"	"
R411	QVZ1709-009	50kΩ		Variable
R412	QVZ1709-010	"		"
R413	QRD141J-432S	4.3kΩ	1/4W	Carbon
R414	QRD141J-432S	"	"	"
R415	QRD141J-391S	390Ω	"	"
R416	QRD141J-391S	"	"	"
R417	QRD141J-183S	18kΩ	"	"
R418	QRD141J-183S	"	"	"
R419	QRD141J-105S	1MΩ	"	"
R420	QRD141J-105S	"	"	"
R451	QRG027-331	330Ω	2W	Oxied Metal Film ⚠
R452	QRG027J-331	"	"	"
R601	QRD148J-913S	91kΩ	1/4W	Carbon
R602	QRD148J-433S	43kΩ	"	"
R603	QRD148J-114S	110kΩ	"	"
R607	QRD149J-221S	220Ω	"	UNF. Carbon ⚠
R608	QRD149J-221S	"	"	"
R609	QRD141J-513S	51kΩ		Carbon
R651	QRD141J-623S	62kΩ	"	"
R652	QRD149J-221S	220Ω	"	UNF. Carbon ⚠
R653	QRG027J-122	1.2kΩ	2W	Oxied Metal Film ⚠
R654	QRD141J-473S	47kΩ	1/4W	Carbon
R655	QRD141J-472S	4.7kΩ	"	"
R656	QRD141J-472S	"	"	"
R657	QRD141J-394S	390kΩ	"	"
R658	QRD141J-394S	"	"	"
R659	QRD141J-182S	1.8kΩ	"	"
R660	QRD141J-103S	10kΩ	"	"
R661	QRD141J-101S	100Ω	"	"
R662	QRD141J-103S	10kΩ	"	"
R663	QRD141J-563S	56kΩ	"	"
R664	QRD141J-563S	"	"	"
R665	QRD141J-105S	1MΩ	"	"

⚠ : Sefety Parts

Others

Item No.	Part Number	Rating	Description
	EMG7331-001		Fuse Clip
	E10695-001		Circuit Board
	SBSB3008CC		Screw (coppered)
	SBSB3008M		Screw
	E61537-001		Heat-Sink
J301	E04365-007		Formed Wire Socket
J302	E04365-007		Formed Wire Socket
J451	QMS6302-105		Jack Assy
P301	QMV5005-003		3P Plug Assy
S251	QST5442-E01		Push Switch

7-(3) TXX-374 Power Amp. P.C. Board Ass'y

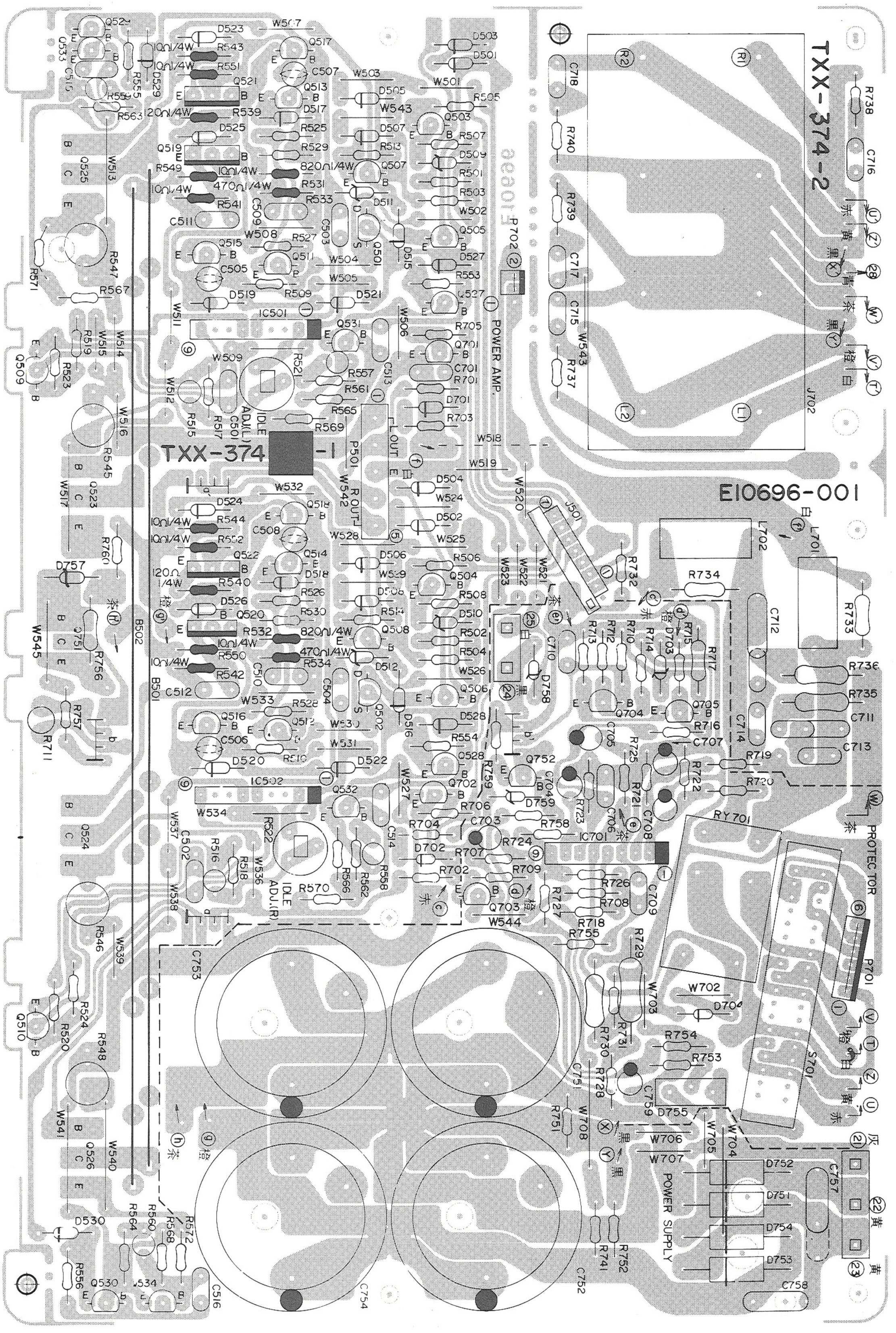

TXX-374-2
TXX-374 -1
E10696-001
POWER AMP.
POWER SUPPLY
PROTECTOR
IDLE ADJ.(L)
IDLE ADJ.(R)
L OUT
R OUT
IC501
IC502
IC701
RY701
S701
J702
J501
P501
P701
P702
L701
L702

Fig. 11

Transistors

Item No.	Part Number	Rating	Description	
				Maker
Q501	2SK170(BL,V)		F.E.T.	Toshiba
Q502	2SK170(BL,V)		"	"
Q503	2SA970(GR,BL)		Silicon	"
Q504	2SA970(GR,BL)		"	"
Q505	2SC2910(S,T)		"	Sanyo
Q506	2SC2910(S,T)		"	"
Q507	2SC2910(S,T)		"	"
Q508	2SC2910(S,T)		"	"
Q509	2SC1815(Y,GR)		"	Toshiba
Q510	2SC1815(Y,GR)		"	"
Q511	2SC1815(Y,GR)		"	"
Q512	2SC1815(Y,GR)		"	"
Q513	2SA1015(Y,GR)		"	"
Q514	2SA1015(Y,GR)		"	"
Q515	2SC2240(BL)		"	"
Q516	2SC2240(BL)		"	"
Q517	2SA970(BL)		"	"
Q518	2SA970(BL)		"	"
Q519	2SD669A(B,C)		"	Hitachi
Q520	2SD669A(B,C)		"	"
Q521	2SB649A(B,C)		"	"
Q522	2SB649A(B,C)		"	"
Q523	2SC2838LF(O,Y)		"	Sanken
Q524	2SC2838LF(O,Y)		"	"
Q525	2SA1187LF(O,Y)		"	"
Q526	2SA1187LF(O,Y)		"	"
Q527	2SA1015(Y)		"	Toshiba
Q528	2SA1015(Y)		"	"
Q529	2SC1815(Y)		"	"
Q530	2SC1815(Y)		"	"
Q531	2SC1815(Y)		"	"
Q532	2SC1815(Y)		"	"
Q533	2SA1015(Y)		"	"
Q534	2SA1015(Y)		"	"
Q701	2SC2240(GR,BL)		"	"
Q702	2SC2240(GR,BL)		"	"
Q703	2SA970(GR,BL)		"	"
Q751	2SD1265A(O,P)		"	Matsushita
Q752	2SA1015(Y,GR)		"	Toshiba

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D511	RD2.7EB2		Silicon (Zener)	NEC
D512	RD2.7EB2		"(")	"
D515	1S2076-31		Silicon	Hitachi
D516	1S2076-31		"	"
D517	1S2076-31		"	"
D518	1S2076-31		"	"
D519	1S2076-31		"	"
D520	1S2076-31		"	"
D521	1SS81		"	"
D522	1SS81		"	"
D523	1SS81		"	"
D524	1SS81		"	"
D525	1S2076-31		"	"
D526	1S2076-31		"	"
D527	1S2076-31		"	"
D528	1S2076-31		"	"
D529	1S2076-31		"	"
D530	1S2076-31		"	"
D701	1S2076-31		"	"
D702	1S2076-31		"	"
D704	1S2076-31		"	"
D751	S3V20F		"	Shindengen ⚠
D752	S3V20F		"	"
D753	S3V20F		"	"
D754	S3V20F		"	"
D755	S2VC20R		"	"
D757	RD2.7EB2		" (Zener)	NEC
D758	RD10EB3		" (")	"
D759	RD5.6EB3		" (")	"

Coils

Item No.	Part Number	Rating	Description
L701	EQL0003-1R0		Choke Coil
L702	EQL0003-1R0		"

Integrated Circuits

Item No.	Part Number	Rating	Description	
				Maker
IC501	VC5022-2		I.C.	Sanyo
IC502	VC5022-2		"	"
IC701	TA7317P		"	Toshiba

Capacitors

Item No.	Part Number	Rating		Description
C503	QFP31HJ-472	4700pF	50V	Polypropylene
C504	QFP31HJ-472	"	"	"
C505	QFS82BJ-680	68pF		Polystyrene
C506	QFS82BJ-680	"		"
C507	QFS82BJ-330	33pF		"
C508	QFS82BJ-330	"		"
C509	QFM81HJ-123	0.012μF	50V	Mylar
C510	QFM81HJ-123	"	"	"
C511	QFM81HJ-104	0.1μF	"	"
C512	QFM81HJ-104	"	"	"
C513	QFM81HJ-102	1000pF	"	"
C514	QFM81HJ-102	"	"	"
C515	QFM81HJ-102	"	"	"
C516	QFM81HJ-102	"	"	"
C703	QET51HR-226H	22μF	"	Electrolytic
C704	QET51CR-226H	"	16V	"
C705	QET51HR-474H	0.47μF	50V	Mylar
C706	QFM81HJ-153	0.015μF	"	Electrolytic
C707	QET51AR-476H	47μF	10V	"
C708	QET51AR-476H	"	"	"

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D501	1S2076-31		Silicon	Hitachi
D502	1S2076-31		"	"
D503	1S2076-31		"	"
D504	1S2076-31		"	"
D505	1S2076-31		"	"
D506	1S2076-31		"	"
D507	1S2076-31		"	"
D508	1S2076-31		"	"
D509	RD2.7EB2		" (Zener)	NEC
D510	RD2.7EB2		" (")	"

Capacitors

Item No.	Part Number	Rating		Description
C709	QFM81HJ-102	1000pF	50V	Mylar
C711	QFM81HJ-104	0.1μF	"	"
C712	QFM81HJ-104	"	"	"
C713	QFM81HJ-104	"	"	"
C714	QFM81HJ-104	"	"	"
C715	QFM81HJ-103	0.01μF	"	" (for W.Germany)
C716	QFM81HJ-103	"	"	Mylar (for W.Germany)
C717	QFM81HJ-103	"	"	Mylar (for W.Germany)
C718	QFM81HJ-103	"	"	Mylar (for W.Germany)
C751	EEW6303-568	5600μF	"	Electolytic
C752	EEW6303-568	"	"	"
C753	EEW6302-688	6800μF	"	"
C754	EEW6302-688	"	"	"
C757	QFZ0074-224	0.22μF		Metallized Mylar
C758	QFZ0074-104	0.1μF		"
C759	QET51HR-105H	1μF	50V	Electrolytic

Resistors

Item No.	Part Number	Rating		Description
R501	QRD141J-473S	47KΩ	1/4W	Carbon
R504	QRD141J-473S	"	"	"
R505	QRD149J-331S	330Ω	"	UNF. Carbon ⚠
R506	QRD149J-331S	"	"	"
R507	QRD149J-222S	2.2kΩ	"	"
R508	QRD149J-222S	"	"	"
R509	QRD149J-271S	270Ω	"	"
R510	QRD149J-271S	"	"	"
R513	QRD149J-470S	47	"	"
R514	QRD149J-470S	"	"	"
R517	QRD141J-151S	150Ω	"	Carbon
R518	QRD141J-151S	"	"	"
R519	QRD141J-391S	390Ω	"	"
R520	QRD141J-391S	"	"	"
R521	QVZ3501-471	470Ω		Variable
R522	QVZ3501-471	"		"
R523	QRD141J-431S	430Ω	1/4W	Carbon
R524	QRD141J-431S	"	"	"
R525	QRD149J-471S	470Ω	"	UNF. Carbon ⚠
R526	QRD149J-471S	"	"	"
R527	QRD149J-471S	"	"	"
R528	QRD149J-471S	"	"	"
R529	QRD149J-471S	"	"	"
R530	QRD149J-471S	"	"	"
R531	QRZ0052-821	820Ω	"	Fusible ⚠
R532	QRZ0052-821	"	"	"
R533	QRZ0052-471	470Ω	"	"
R534	QRZ0052-471	"	"	"
R539	QRZ0052-121	120Ω	"	"
R540	QRZ0052-121	"	"	"
R541	QRZ0052-100	10Ω	"	"
R542	QRZ0052-100	"	"	"
R543	QRZ0052-100	"	"	"
R544	QRZ0052-100	"	"	"
R545	QRZ0001-R22	0.22Ω	"	Cement ⚠
R546	QRZ0001-R22	"	"	"
R547	ERZ0001-R22	"	"	"
R548	ERZ0001-R22	"	"	"
R549	QRZ0052-100	10Ω	"	Fusible ⚠
R550	QRZ0052-100	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R551	QRZ0052-100	10Ω	1/4W	Fusible ⚠
R552	QRZ0052-100	"	"	"
R553	QRD141J-103S	10kΩ	"	Carbon
R554	QRD141J-103S	"	"	"
R555	QRD141J-103S	"	"	"
R556	QRD141J-103S	"	"	"
R561	QRD141J-820S	82Ω	"	"
R562	QRD141J-820S	"	"	"
R563	QRD141J-820S	"	"	"
R564	QRD141J-820S	"	"	"
R565	QRD148J-111S	110Ω	"	"
R566	QRD148J-111S	"	"	"
R567	QRD148J-111S	"	"	"
R568	QRD148J-111S	"	"	"
R569	QRD148J-151S	150Ω	"	"
R570	QRD148J-151S	"	"	"
R571	QRD148J-131S	130Ω	"	"
R572	QRD148J-131S	"	"	"
R701	QRD141J-222S	2.2kΩ	"	"
R702	QRD141J-222S	"	"	"
R703	QRD141J-183S	18kΩ	"	"
R704	QRD141J-183S	"	"	"
R705	QRD141J-333S	33kΩ	"	"
R706	QRD141J-333S	"	"	"
R707	QRD141J-103S	10kΩ	"	"
R708	QRD141J-473S	47kΩ	"	"
R709	QRD141J-332S	3.3kΩ	"	"
R718	QRD141J-123S	12kΩ	"	"
R719	QRD141J-563S	56kΩ	"	"
R720	QRD141J-563S	"	"	"
R721	QRD141J-273S	27kΩ	"	"
R722	QRD141J-273S	"	"	"
R723	QRD141J-333S	33kΩ	"	"
R724	QRD141J-334S	330kΩ	"	"
R725	QRD141J-683S	68kΩ	"	"
R726	QRD141J-683S	"	"	"
R727	QRD141J-273S	27kΩ	"	"
R728	QRD149J-270S	27Ω	"	UNF.Carbon ⚠
R729	QRG027J-471	470Ω	2W	Oxide Metal Film ⚠
R730	QRG017J-271S	270Ω	1W	"
R731	QRD141J-103S	10kΩ	1/4W	Carbon
R732	QRD141J-123S	12kΩ	"	"
R733	QRD129J-330	33Ω	1/2W	UNF. Carbon ⚠
R734	QRD129J-330	"	"	"
R735	QRX017J-4R7S	4.7Ω	1W	Metal Film ⚠
R736	QRX017J-4R7S	"	"	"
R737	QRZ0052-100	10Ω	1/4W	Fusible ⚠ (for W. Germany)
R738	QRZ0052-100	"	"	Fusible ⚠ (for W. Germany)
R739	QRZ0052-100	"	"	Fusible ⚠ (for W. Germany)
R740	QRZ0052-100	"	"	Fusible ⚠ (for W. Germany)
R741	QRD141J-103S	10kΩ	"	Carbon
R751	QRD141J-563S	56kΩ	"	"
R752	QRD141J-563S	"	"	"
R753	QRD141J-103S	10kΩ	"	"
R754	QRD141J-822S	8.2kΩ	"	"
R755	QRD141J-104S	100kΩ	"	"
R756	QRD129J-150	15Ω	1/2W	UNF. Carbon ⚠
R757	QRD141J-103S	10kΩ	1/4W	Carbon
R758	QRD141J-682S	6.8kΩ	"	"
R759	QRD141J-222S	2.2kΩ	"	"
R760	QRD149J-4R7S	4.7Ω	"	UNF. Carbon ⚠

⚠ : Safety Parts

Thermisters

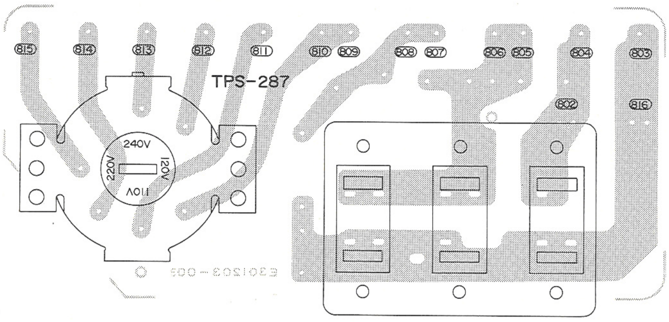
Item No.	Part Number	Rating	Description	
				Maker
R515	ERT-D2WFL351S			Matsushita
R516	ERT-D2WFL351S			"
R557	ERT-D2WFL351S			"
R558	ERT-D2WFL351S			"
R559	ERT-D2WFL351S			"
R560	ERT-D2WFL351S			"

Others

Item No.	Part Number	Rating,	Description
	E10696-001		Circuit Board
	E67294-003		Leaf Spring
	E302102-001		Heat-sink bracket
	E302102-002		Heat-sink bracket
	LPSP3012N		Screw
	SBSB3008CC		Screw (coppered)
	SBSE3012CC		Screw (")
	E300209-010		Heat-sink
J501	E04365-007		Formed Wire Socket
J702	EMB00TP-801A		Speaker Terminal
P501	E03628-5UD		5 Pin Plug
P701	QMV5005-006		6P Plug Assy
P702	QMV5005-002		2P Plug Assy
S701	QSS6401-501		Slide Switch
RY701	ESK5D24-214		Relay

7-(4) TPS-287C AC Unit P.C. Board Ass'y

[for U.S.A. and Canada]

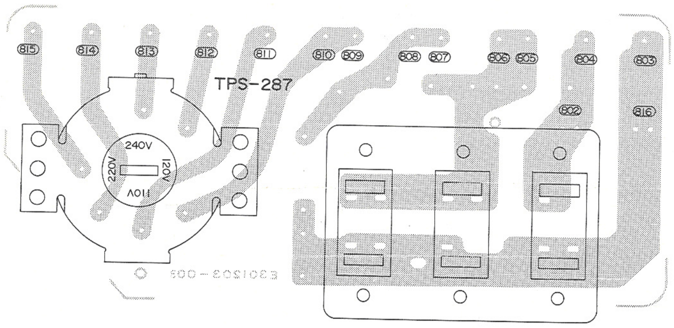

815
814
813
812
811
810
809
808
807
806
805
804
803
802
816
TPS-287
240V
220V
120V
110V
E301203-001

Item No.	Part Number	Rating	Description
C001	QCZ9014-103A	0.01 μF	Ceramic Capacitor ⚠
	QMC0637-004		AC Outlet ⚠
	QSR0085-001		Voltage Selector ⚠
	E301203-003		Circuit Board

Fig. 12

7-(5) TPS-287D AC Unit P.C. Board Ass'y

[for U.S. Military Market and Other Countries]

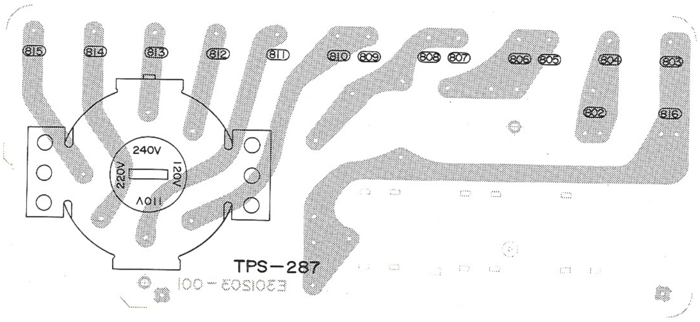

815
814
813
812
811
810
809
808
807
806
805
804
803
802
816
TPS-287
240V
220V
120V
110V
E301203-001

Item No.	Part Number	Rating	Description
C001	QFZ9010-103	0.01μF	Metalized Mylar Capacitor ⚠
	QMC0637-004		AC Outlet ⚠
	QSR0085-001U		Voltage Selector ⚠
	E301203-003		Circuit Board

Fig. 13

7-(6) TPS-287E AC Unit P.C. Board Ass'y

[for Europe, Australia, U.K. and West Germany]


815
814
813
812
811
810
809
808
807
806
805
804
803
802
816
240V
220V
120V
110V
TPS-287
E301203-001

Item No.	Part Number	Rating	Description
C001	QFZ9010-103	0.01μF	Metalized Mylar Capacitor ⚠
	QSR0085-001U		Voltage Selector ⚠
	E47448-001		Holder
	E301203-001		Circuit Board

⚠ : Safety Parts

Fig. 14

8. Packing Materials and Part Numbers

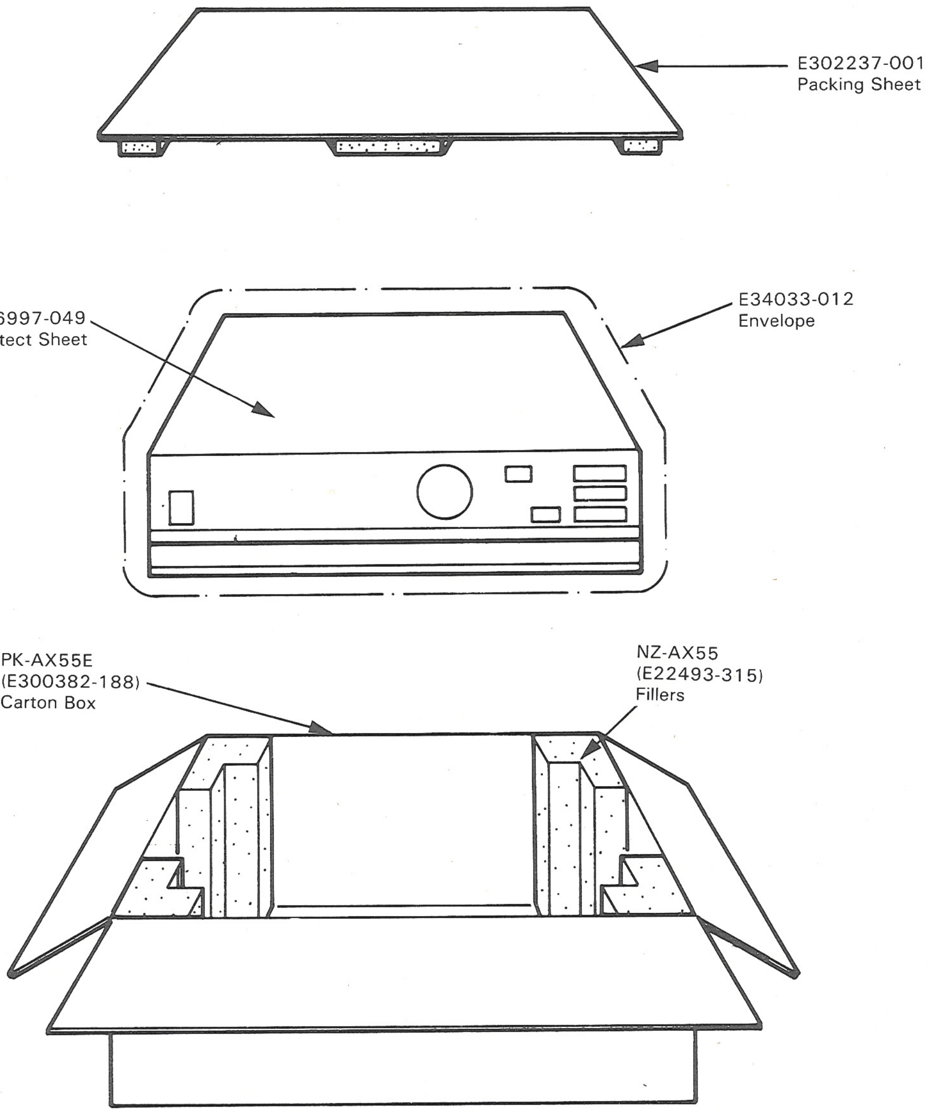

E302237-001
Packing Sheet
E36997-049
Protect Sheet
E34033-012
Envelope
PK-AX55E
(E300382-188)
Carton Box
NZ-AX55
(E22493-315)
Fillers

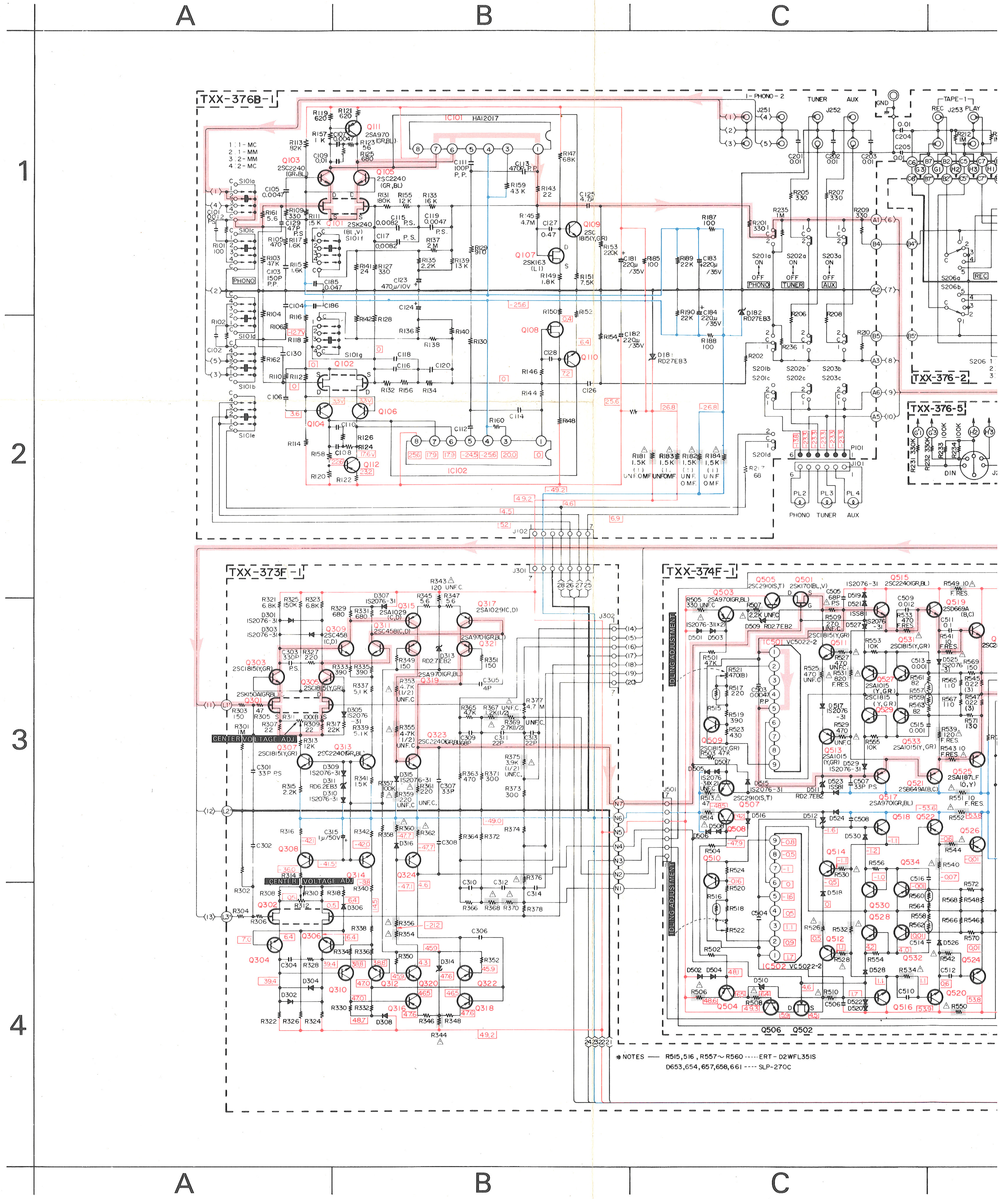
Fig. 15

9. Accessories List

Note: Instruction Book (Dutch & Spanish) for Europe and Other Countries E30580-1036A

Item No.	Part Number	Description	Q'ty
1	E30580-981A	Instruction Book	1
2	See page 22	Warranty Card	1
3	QMF51A2-6R3S (6.3A) or QMF51A2-3R15S (3.15A)	Fuse Primary (for U.S. Military Market and Other Countries)	1
4	E67142-T6R3 (6.3A) or E67142-T3R15 (3.15A)	Fuse Label (for U.S. Military Market and Other Countries)	1
5	BT20046A	Service Information Card (for U.S.A. and U.S. Military Market)	1
6	BT20044B	Safety Instruction Sheet (for U.S.A. only)	1
7	E41202-2	Envelope for Instruction Book and Warranty Card	1
8	E64208-001	Envelope for Fuse (for U.S. Military Market and Other Countries)	1

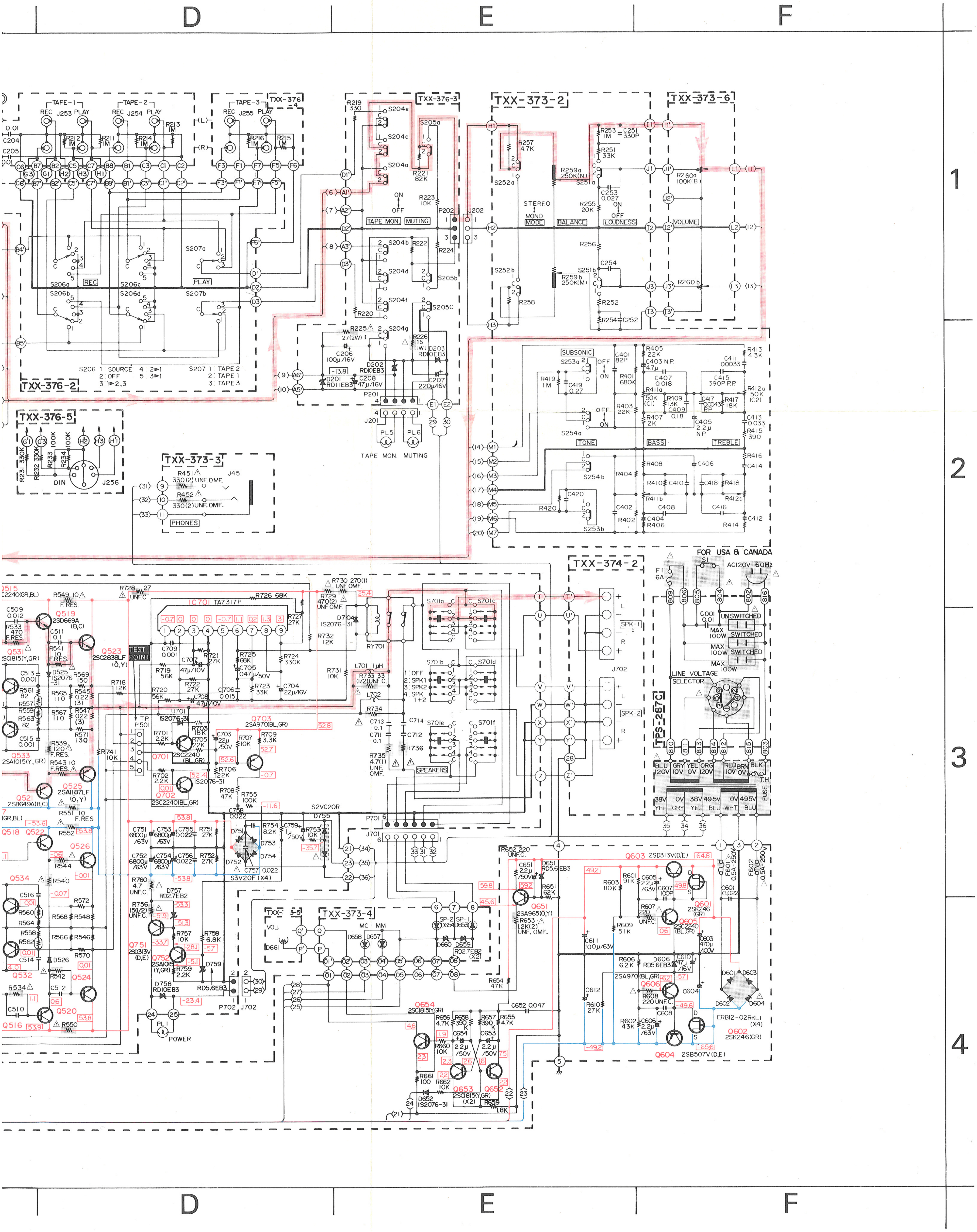
10. A-X55 Schematic Diagram


A
B
C
1
2
3
4
TXX-376B-1
TXX-373F-1
TXX-374F-1
TXX-376-2
TXX-376-5
IC101 HA12017
IC102
IC501 VC5022-2
IC502 VC5022-2
1 : 1 - MC
2 : 1 - MM
3 : 2 - MM
4 : 2 - MC
PHONO
TUNER
AUX
I - PHONO - 2
J251
J252
J253 PLAY
REC
TAPE-1
GND
DIN
PL2
PL3
PL4
J101
P101
J102
J301
J302
J501
S201a ON OFF PHONO
S202a ON OFF TUNER
S203a ON OFF AUX
CENTER VOLTAGE ADJ
IDLING ADJUSTMENT
Q506
Q502

*NOTES — R515, 516, R557～R560 ····· ERT - D2WFL351S
D653, 654, 657, 658, 661 ···· SLP-270C

Notes:

1. Voltage values in ▭ are measured with a tester (impedance 20kΩ/V).
2. ▬ indicates positive B power supply.
3. ▬ indicates negative B power supply.
4. ▨ indicates signal path.
5. When replacing the parts in the darkened are (▨) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
6. Parts in red indicate transistors or ICs.
7. This is the standard circuit diagram. The design and contents are subject notice.


D
E
F
1
2
3
4
TXX-376-2
TXX-376-4
TXX-376-3
TXX-376-5
TXX-373-2
TXX-373-6
TXX-373-3
TXX-373-4
TXX-374-2
TPS-287C
TXX-3-5
TAPE MON
MUTING
STEREO
MONO
MODE
BALANCE
LOUDNESS
VOLUME
SUBSONIC
TONE
BASS
TREBLE
PHONES
SPEAKERS
POWER
TEST POINT
FOR USA & CANADA
AC120V 60Hz
LINE VOLTAGE SELECTOR
UNSWITCHED
SWITCHED
FUSE

e transistors or ICs.
circuit diagram.
ontents are subject to change without

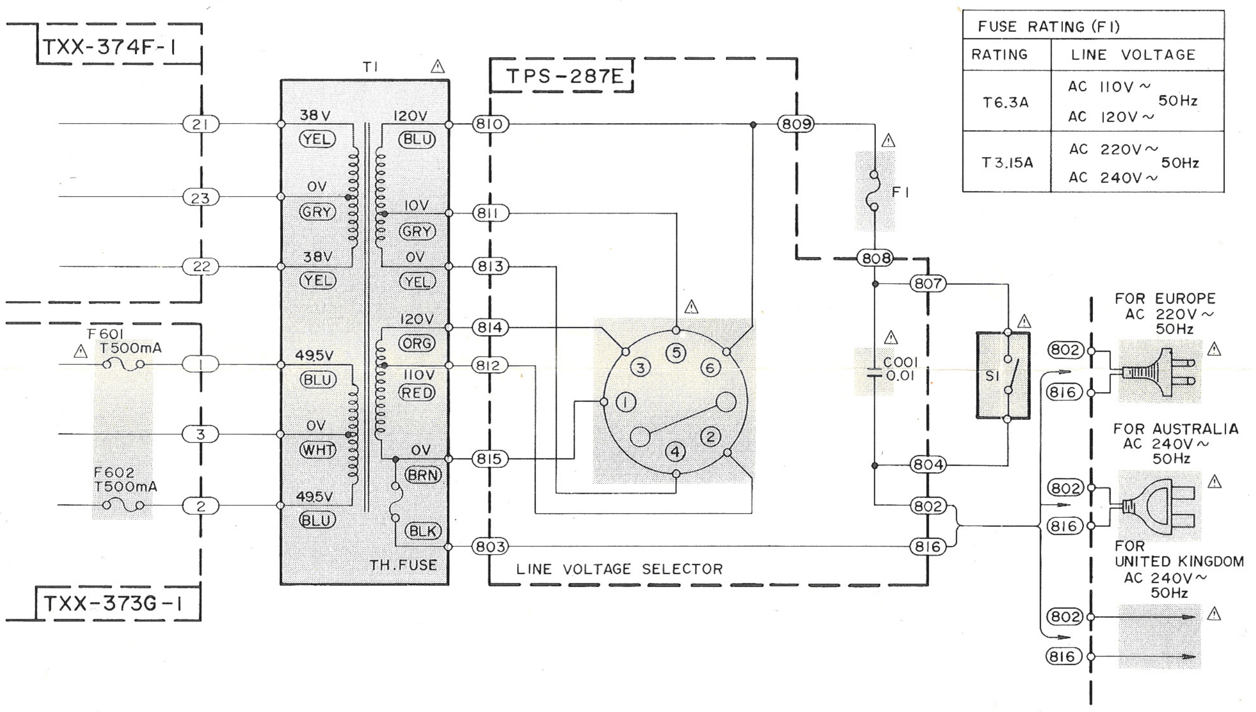
Printed Circuit Board Ass'y Location

P.C. Board Ass'y	Description	Page
TXX-376	Equalizer Amp. P.C. Board Ass'y	9
TXX-373	Drive Amp. P.C. Board Ass'y	12
TXX-374	Power Amp. P.C. Board Ass'y	15
TPS-287C	AC Unit P.C. Board Ass'y	18
TPS-287D	"	18
TPS-287E	"	18

11. Power Supply Block for Designated Areas

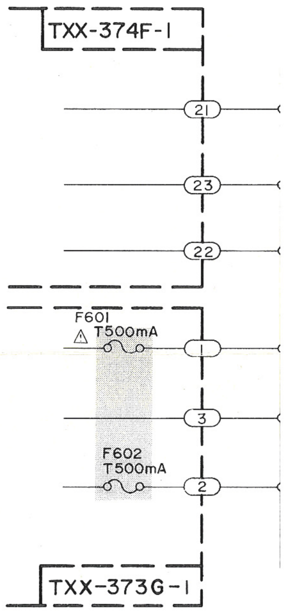
(E),(A),(BS)
(E) FOR EUROPE : ~220V, 50Hz
(A) FOR AUSTRALIA : ~240V, 50Hz
(BS) FOR U.K : ~240V, 50Hz

FUSE RATING (F1)	
RATING	LINE VOLTAGE
T6.3A	AC 110V~ 50Hz AC 120V~
T3.15A	AC 220V~ 50Hz AC 240V~

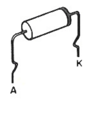


TXX-374F-1
T1
TPS-287E
21
23
22
1
3
2
38V
YEL
0V
GRY
38V
YEL
495V
BLU
0V
WHT
495V
BLU
120V
BLU
10V
GRY
0V
YEL
120V
ORG
110V
RED
0V
BRN
BLK
TH.FUSE
810
811
813
814
812
815
803
809
808
807
804
802
816
F1
C001 0.01
S1
F601 T500mA
F602 T500mA
TXX-373G-1
LINE VOLTAGE SELECTOR
1
2
3
4
5
6
FOR EUROPE AC 220V~ 50Hz
FOR AUSTRALIA AC 240V~ 50Hz
FOR UNITED KINGDOM AC 240V~ 50Hz

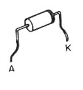
(U),(P)



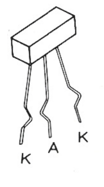
TXX-374F-1
21
23
22
F601 T500mA
1
3
F602 T500mA
2
TXX-373G-1



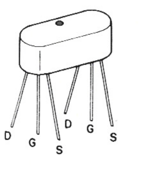
D751~754
S3V20F



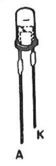
D601~604
ERB12-02RKL1



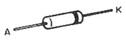
D755
S2VC20R



Q101, 102
2SK240V (BL,V)

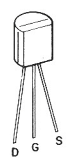


D653, 654, 657, 658, 661
SLP-270C

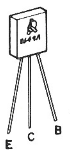


D101, 102, 301~310, 313~316, 501~508, 515~520, 525~528, 652, 701, 704
1S2076-31
D521, 522
1SS81
D313, 314, 509~512, 757, 659, 660
RD2.7EB2
D651, 609, 759
RD5.6EB3

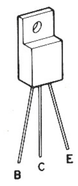
D311, 312
RD6.2EB3
D202, 203, 758
RD10EB3
D201
RD11EB3
D181, 182
RD27EB3



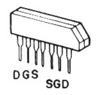
Q601, 602
2SK246 (GR)
Q107, 108
2SK163 (L1)
Q501, 502
2SK170 (BL,V)



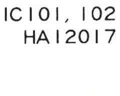
Q519, 520
2SD669A (B,C)
Q521, 522
2SB649A (B,C)



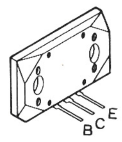
Q604
2SB507V (D,E)
Q603
2SD313V (D,E)
Q751
2SD1265A (O,P)



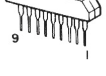
Q301, 302
2SK150A (GR,BL)



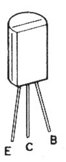
IC101, 102
HA12017



Q523, 524
2SC2838LF
Q525, 526
2SA1187LF

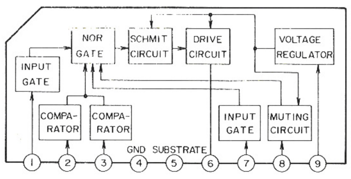


IC701
TA7317P
IC501, 502
VC5022-2



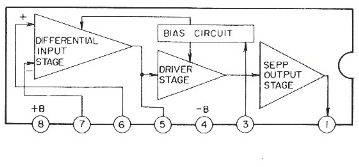
Q111, 112, 319~322, 503, 504, 517, 518, 703, 606
2SA970 (GR,BL)
Q103~106, 313, 314, 323, 324, 515, 516, 701, 702, 605
2SC2240 (GR,BL)
Q109, 110, 303~308, 509~512, 529~532, 652~654
2SC1815 (Y,GR)
Q513, 514, 527, 528, 533, 534, 752
2SA1015 (Y,GR)

Q309~312
2SC458
Q505~508
2SC2910 (S,T)



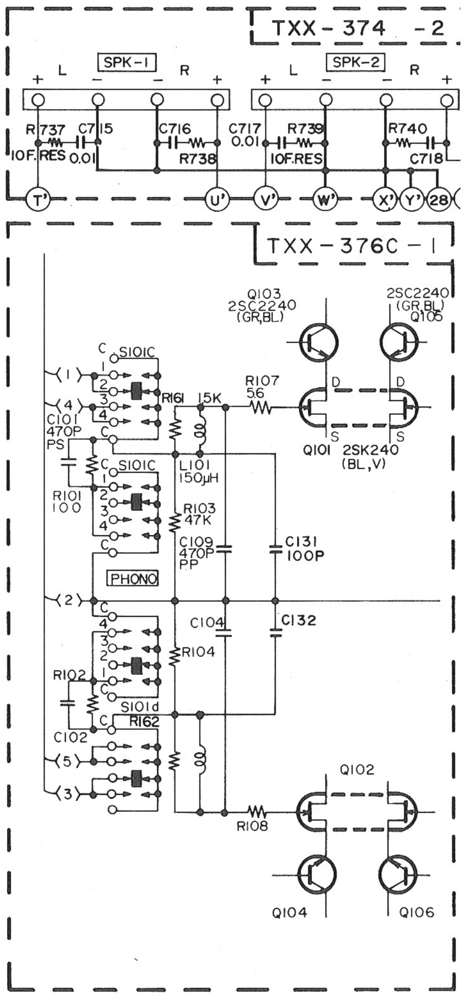
INPUT GATE
NOR GATE
SCHMIT CIRCUIT
DRIVE CIRCUIT
VOLTAGE REGULATOR
COMPA-RATOR
COMPA-RATOR
GND SUBSTRATE
INPUT GATE
MUTING CIRCUIT
1
2
3
4
5
6
7
8
9

TA7317P



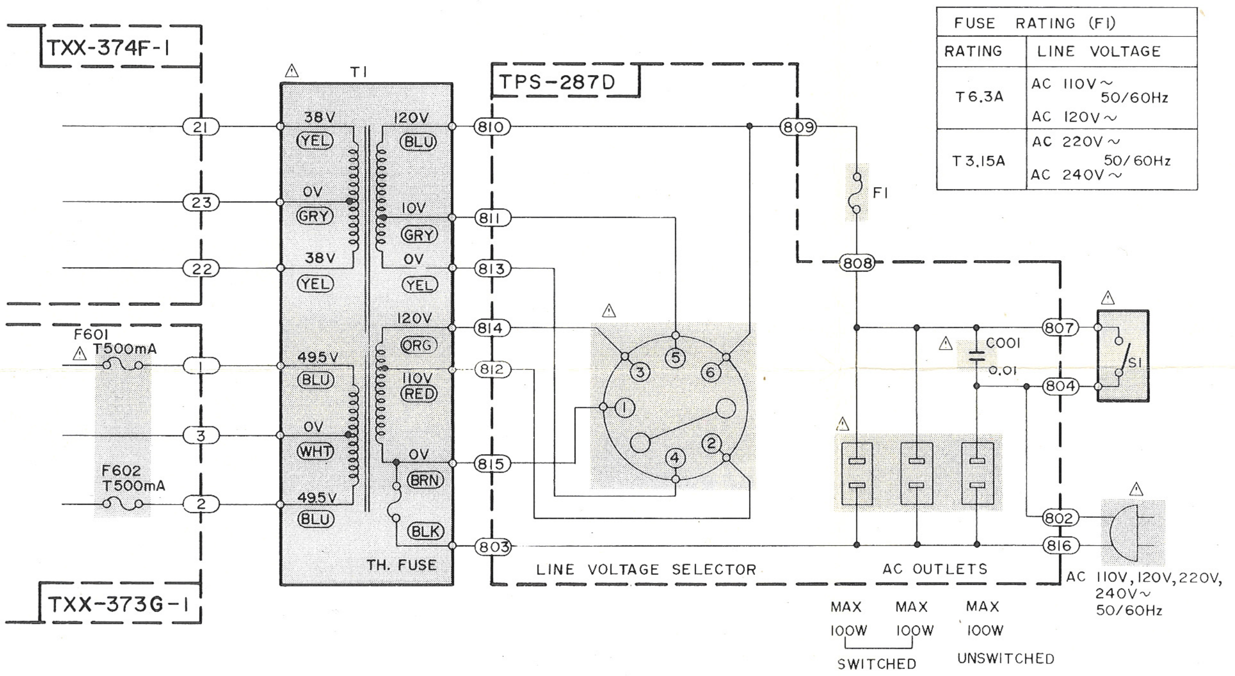
DIFFERENTIAL INPUT STAGE
BIAS CIRCUIT
DRIVER STAGE
SEPP OUTPUT STAGE
+B
-B
8
7
6
5
4
3
1

HA12017



TXX-374-2
SPK-1
SPK-2
+ L - R +
R737
C715
10F.RES
0.01
C716
R738
C717
0.01
R739
10F.RES
R740
C718
T'
U'
V'
W'
X'
Y'
28
TXX-376C-1
Q103 2SC2240 (GR,BL)
2SC2240 (GR,BL) Q105
S101C
R161
15K
R107 56
Q101 2SK240 (BL,V)
C101 470P PS
L101 150μH
R101 100
R103 47K
C109 470P PP
C131 100P
PHONO
C104
C132
R104
R102
S101d
R162
C102
Q102
R108
Q104
Q106
(1)
(4)
(2)
(5)
(3)

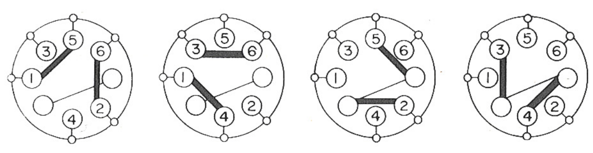
(U),(P) (U) FOR OTHER COUNTRIES
(P) FOR U.S. MILITARY MARKET


TXX-374F-1
TXX-373G-1
TPS-287D
T1
38V
YEL
0V
GRY
495V
BLU
WHT
120V
10V
ORG
110V
RED
BRN
BLK
TH. FUSE
F601 T500mA
F602 T500mA
21
23
22
1
3
2
810
811
813
814
812
815
803
809
808
807
804
802
816
F1
C001 0.01
S1
LINE VOLTAGE SELECTOR
AC OUTLETS
MAX 100W
MAX 100W
MAX 100W
SWITCHED
UNSWITCHED
AC 110V,120V,220V, 240V~ 50/60Hz

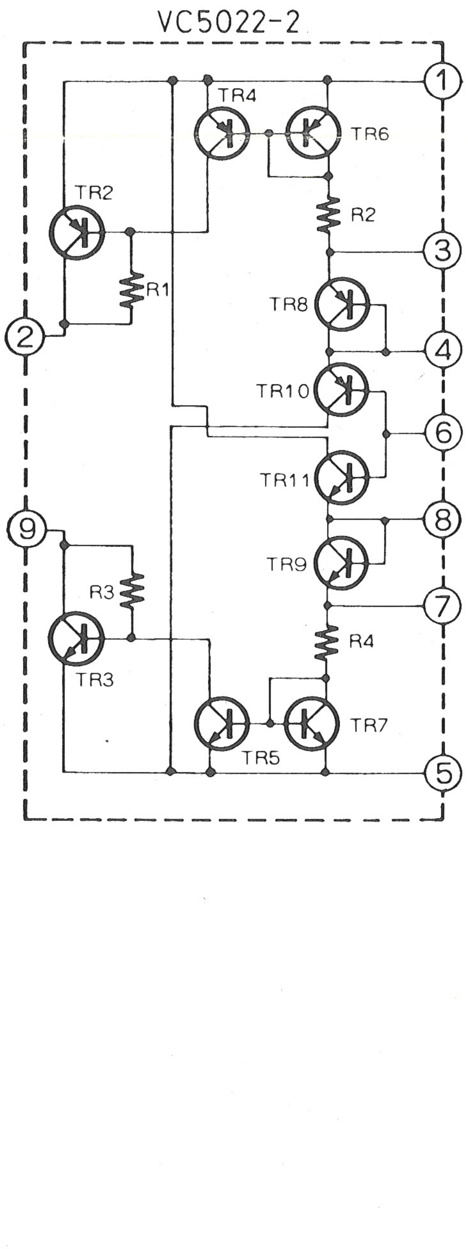
FUSE RATING (F1)

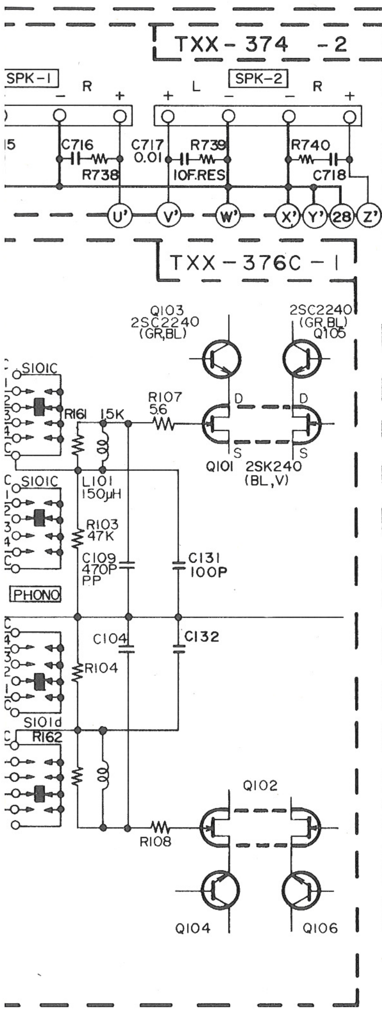
RATING	LINE VOLTAGE
T6.3A	AC 110V~ 50/60Hz AC 120V~
T3.15A	AC 220V~ 50/60Hz AC 240V~

VOLTAGE SELECTOR CONNECTION

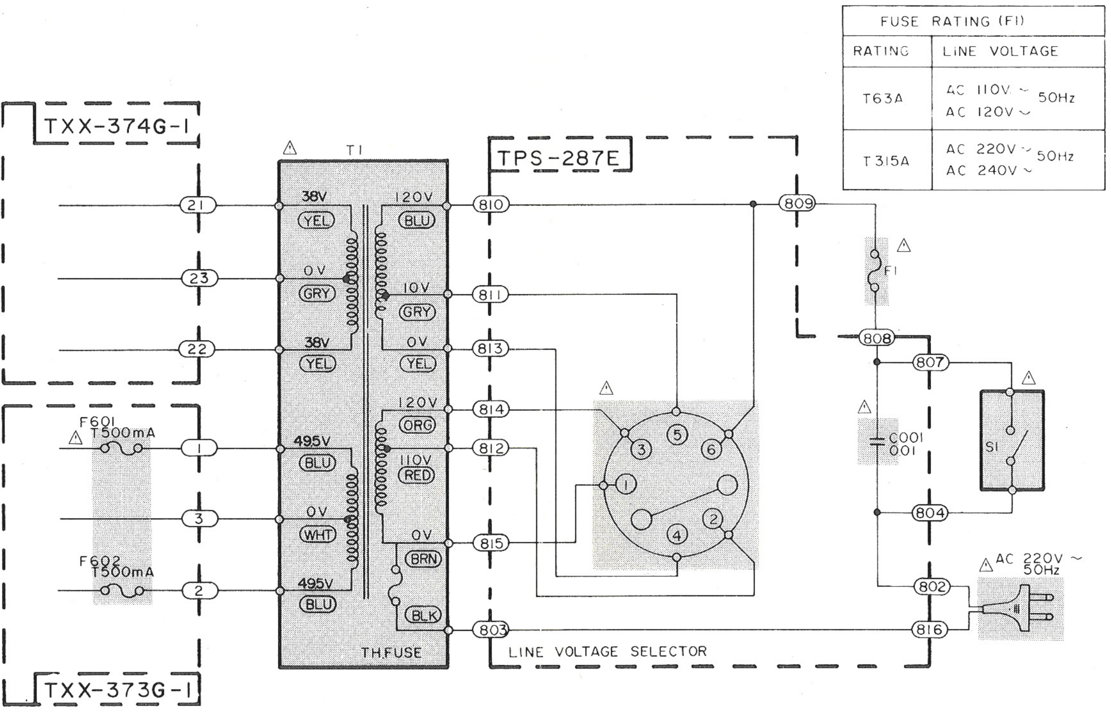


TOP VIEW


VC5022-2
TR1
TR2
TR3
TR4
TR5
TR6
TR7
TR8
TR9
TR10
TR11
R1
R2
R3
R4
1
2
3
4
5
6
7
8
9


TXX-374 -2
SPK-1
SPK-2
R
L
C716
C717 0.01
R738
R739 10F.RES
R740
C718
U'
V'
W'
X'
Y'
28
Z'
TXX-376C-1
Q103 2SC2240 (GR,BL)
2SC2240 (GR,BL) Q105
R107 56
R161
15K
Q101 2SK240 (BL,V)
S101c
L101 150μH
R103 47K
C109 470P PP
C131 100P
PHONO
C104
C132
R104
S101d
R162
Q102
R108
Q104
Q106

(G) FOR WEST GERMANY : ~220V, 50Hz


TXX-374G-1
TXX-373G-1
TPS-287E
T1
38V
YEL
0V
GRY
495V
BLU
WHT
120V
10V
ORG
110V
RED
BRN
BLK
TH.FUSE
F601 T500mA
F602 T500mA
21
23
22
1
3
2
810
811
813
814
812
815
803
809
808
807
804
802
816
F1
C001 .001
S1
LINE VOLTAGE SELECTOR
AC 220V~ 50Hz

FUSE RATING (F1)

RATING	LINE VOLTAGE
T63A	AC 110V~ 50Hz AC 120V~
T315A	AC 220V~ 50Hz AC 240V~

12. Parts List with Specified Number for Designated Areas

Item No.	Description	U.S.A. & Canada	Europe & West Germany	Australia	U.K.	U.S. Military Market & Other Countries
1	Power Switch ⚠	QSP1110-310	QSP1106-002	QSP1106-002	QSP1106-002	QSP1106-002
2	Switch Cover	–	E67520-002	–	E67520-002	E67520-002
3	AC Cover	–	E302104-001	E302104-001	E302104-001	–
4	Power Cord ⚠	QMP1200-200	QMP3900-200	QMP2560-244	QMP9017-008	QMP1200-200
5	Siemens Plug ⚠	–	–	–	–	E04056
6	Fuse Socket ⚠	QMG0201-003	QMG0301-003	QMG0301-003	QMG0301-003	QMG0301-003
7	Fuse Primary ⚠ (F001)	QMF61U1-6R0 (6A 120V)	QMF51A2-3R15S (3.15A 220V/240V)	QMF51A2-3R15S (3.15A 220V/240V)	QMF51A2-3R15S (3.15A 220V/240V)	QMF51A2-6R3S (6.3A 110/120V) QMF51A2-3R15S (3.15A 220V/240V)
8	Fuse Secondary ⚠ (F601, 602)	QMF51U2-R50 (0.5A)	QMF51A2-R50L (0.5A)	QMF51A2-R50L (0.5A)	QMF51A2-R50L (0.5A)	QMF51A2-R50L (0.5A)
9	Fuse Cover	–	E69291-001	E69291-001	E69291-001	–
10	Rear Panel	E24085-003	E24085-004	E24085-004	E24085-004	E24085-005
11	Voltage Selector ⚠	QSR0085-001	QSR0085-001U	QSR0085-001U	QSR0085-001U	QSR0085-001U
12	Mask Plate for Voltage Selector	E67451-001	–	–	–	–
13	AC Outlet ⚠	QMC0637-004	–	–	–	QMC0637-004
14	Mask Plate for AC Outlet	–	E65494-003	E65494-003	E65494-003	–
15	Warranty Card	BT20048 (for U.S.A.) BT20025E (for Canada)	BT20054-002A (for W.Germany Only)	BT20029B	BT20013C	BT20048 (for U.S.Military Market Only)

Note : ⚠ Safety parts

POWER SPECIFICATIONS

Areas	Line Voltage & Frequency	Power Consumption
U.S.A. & CANADA	AC 120 V, 60 Hz	360 watts, 430 VA
EUROPE, W. GERMANY U.K. & AUSTRALIA	AC 110/120/220/240 V∿ Selectable, 50 Hz	470 watts
OTHER AREAS	AC 110/120/220/240 V∿ Selectable, 50/60 Hz	470 watts